The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLII. CHICAGO, ILLINOIS, MARCH 12, 1904. No. 11.

Original Articles.

PERFORATING GASTRIC ULCER; POSTERIOR GASTRO-ENTEROSTOMY; FOWLER'S POSITION.

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MEDICAL HISTORY OF THE CASE AND REMARKS BY DR. MUSSER.

I have reported with Dr. Wharton a case that was in many respects similar to this. In that case operation was done within ten hours after perforation, which accident fortunately took place while the patient was fasting, an incident corresponding to the course of the second case. In the second case the operation was done five and one-half hours after perforation. The first patient had not had solid food for twenty hours, and only a small amount of coffee eight hours before perforation. The second patient had been without solid food, and had taken only albumin water for from forty-eight to sixty hours. No opportunity to make a gastric analysis was given in the first instance, although it is presumed hyperchlorhydria was present, an extreme state of which was found in the second. Doubtless this excess of acid, unneutralized, contributed to the perforation. Accordingly, it may be well to emphasize the importance of neutralizing the acid by appropriate remedies in cases of gastric ulcer, when food that takes up the acid is not permitted. Without doubt the early operations at the time when the stomachs were empty, were important factors in saving the lives of the patients.

Another point of great interest was one of dissimilarity, but the contrast teaches an important lesson. The first patient was a muscular farmer. Rigidity of the abdominal muscles was extreme. In the second case there was great atrophy of the abdominal walls, and in consequence there was no spasm or rigidity. Hence, given the lesions likely to cause spasm under other circumstances, it will be absent with abdominal walls of the character to be described.

I should like to add that the first patient is in excellent health, no gastric symptoms having returned.

I had seen Mrs. M. during November, at the request of her husband, a physician. She was 70 years of age, and had enjoyed excellent health until one year ago. She had been treated at that time by Dr. Boardman Reed for ulcer of the stomach, characterized by pain and hemorrhage. When seen by me she was suffering from pain, the occasional vomiting of large amounts of fluid, the daily regurgitation of a small amount. The pain was spasmodic, referred to the pylorus and relieved by regurgitation. It was not increased by food, except when the stomach was overfull.

On physical examination, the stomach, overdistended, could be well made out, and visible peristalsis was present. The pain often was coincident with the termination of a wave of peristalsis, at the region of the pylorus.

I concluded that the patient had pyloric obstruction due to spasm. No tumor could be made out. A soft tube passed into the stomach resulted in the withdrawal of two quarts of dark, grumous, offensive material. Afterward there was a perfect relief, and for almost three weeks she was without pain or distress. A test meal (Ewald) revealed total acidity 65, free HCl 40, absence of lactic acid, presence of sarcinæ and large bacilli. The odor was butyric. Lavage was done most carefully only twice, because of the possible ulcer. It seemed that an ulcer had healed causing constriction at the pylorus, or that an active ulcer was attended by pyloric spasm. The small vomitings were due to the regurgitation—the incontinence of retention. November 17 the patient washed out her stomach herself. November 19 sudden profuse hemorrhage occurred; at least a quart was vomited, followed by collapse. Rectal feedings, sips of water and egg albumin were resorted to.

November 26, at 9:30 a. m., she was seized with sudden pain in the median line or to the right, between the xiphoid and the navel, followed by shock. I saw her within half an hour. There was pain, vomiting of mucus, but no blood, rapid pulse, tenderness, no spasm, cool extremities. She lay on the left side chiefly. The pain was considerable in the back and right shoulder. Liver dullness was present. A perforation had doubtless taken place, and an operation was advised.

Dr. Keen saw the patient at 12 m. Dr. Reed, her former attendant, joined us. Reaction had set in. Temperature, 99; pulse, 85. The patient complained of great pain and favored the left lateral dorsal position. Drs. Keen and Reed concurred in the diagnosis of perforation, and urged with me immediate operation. Dr. Keen operated at 3 p. m., five and a half hours after perforation had taken place.

SURGICAL HISTORY AND REMARKS BY DR. KEEN.

I first saw Mrs. M., a woman a little past 70 years of age, in consultation with Dr. J. H. Musser and Dr. Boardman Reed, Nov. 26, 1903, at noon. I had known the patient for a number of years. I had not seen her for three or four years and was struck with her loss of weight and emaciation. After an examination, I fully concurred in the diagnosis of perforated gastric ulcer, and three hours later the operation was done.

An incision was made to the left of the middle line on account of extensive diastasis of the recti muscles following her single pregnancy about forty-eight years ago. Only a very few muscular fibers were seen. The

muscles were not only widely separated, but greatly atrophied. The entire abdominal wall was not over 1 cm. in thickness. As soon as the abdomen was opened, a little turbid, rather dark colored fluid poured out, and when the stomach was drawn out, a few flakes of lymph were found on it. In a moment the perforation was discovered. It was an aperture slightly oval, very sharply punched out, 5 mm. in its long diameter, situated precisely in the middle of the pylorus anteriorly. The whole pylorus was thickened, but not nodulated. Evidently it had been the seat of an old ulcer involving all the anterior wall. The ulcer was immediately closed by a continuous Lembert suture. The abdominal cavity was then flushed out with a large quantity of salt solution, care being taken to wash out between the diaphragm and the liver, and also down into Douglas' cul-de-sac, where a considerable amount of turbid fluid was found. The diaphragm was but little injected. The transverse colon was then turned up, a hole torn through the mesocolon, and a posterior gastro-enterostomy done by means of a Murphy button. The peritoneal cavity was then again most carefully flushed out till the fluid, as in the first instance, returned clear. A number of adhesions were found between the coils of the intestine and the anterior abdominal wall and the omentum and the abdominal wall in the lower half of the abdomen, but I did not think it wise to prolong the operation by interfering with them. She was placed in bed in Fowler's position (i. e., with head of the bed raised).

She made an uninterrupted recovery, her highest temperature being 100.4 F. On December 1, five days after the operation, her temperature reached normal. In consequence of the thinness of her abdominal wall, I kept her in bed for four weeks. She went home December 31, wearing a belt and able to walk about without trouble.

The recovery from so serious a lesion as a perforating gastric ulcer and so serious an operation as abdominal section and gastro-enterostomy in a woman past 70, is a sufficient reason, it would seem, for recording such a case. Her recovery was due, I have no question, largely, first, to the promptness with which Dr. Musser acted; and, secondly, to the fact that her stomach contained little beside albuminized water. Yet, in spite of this favorable condition of the stomach, there were a few flakes of lymph already present on the stomach. A culture was taken from the abdominal cavity as soon as it was opened, and this proved, after eight days, to be sterile. I do not know that Fowler's position influenced the recovery in this case very much, in view of the facts just stated, but it certainly, at least, did no harm.

I debated for a few moments whether I should do Finney's gastroduodenostomy by means of a horse-shoe-shaped incision extending from the duodenum into the stomach. I, however, finally decided against it on account of the great thickening of the whole anterior pylorus, and because I believed it would take longer than a gastro-enterostomy by the Murphy button. For the last reason also I decided against a gastro-enterostomy with simple suture.

Up to the present time, over two months after the operation, the button has not passed, but it has not produced any trouble.

To irrigate wounds or large cavities employ solutions at or slightly above body temperature, as cold interferes with repair. —*Internat. Jour. of Surg.*

BOVINE AND HUMAN TUBERCULOSIS.*

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In the last two reports presented by this committee considerable space was devoted to the subject of tuberculosis, and particularly to that phase of it which relates to the transmission of the disease from animals to man. It was shown from a review of the facts obtained by different methods of inquiry that the clinical evidence, the evidence of statistics, and the evidence from experimental researches all favored the conclusion that animal tuberculosis was a factor in the causation of human tuberculosis, and it was held that sanitarians should advocate and enforce measures to prevent the transmission of the disease from animals to man. This question is so important and so much uncertainty has been caused by the paper presented at the British Congress on Tuberculosis by Koch, and by his subsequent address at the International Conference on Tuberculosis at Berlin, that it is deemed advisable to continue the discussion in the present report.

The fact that tubercular material from human subjects often failed to produce serious disease in cattle was observed by a number of the earlier investigators who experimented with such virus. It was the experiments and comparative studies of Theobald Smith, however, which attracted special attention to the difference in virulence shown by tubercle bacilli from human and bovine sources when inoculated on cattle. Smith also mentioned certain morphologic and cultural differences in bacilli from these two sources, and in the location and histology of the lesions in cattle produced by such bacilli. He did not conclude, however, that bovine bacilli could not produce disease in the human subject, but said: "It seems to me that, accepting the clinical evidence on hand, bovine tuberculosis may be transmitted to children when the body is overpowered by large numbers of bacilli, as in udder tuberculosis, or when certain unknown favorable conditions exist."

Koch, however, in his address at the British Congress on Tuberculosis, went far beyond this and maintained that "human tuberculosis differs from bovine, and can not be transmitted to cattle." As to the susceptibility of man to bovine tuberculosis, he said it was not yet absolutely decided, but one was "nevertheless already at liberty to say that, if such a susceptibility really exists, the infection of human beings is but a very rare occurrence." He emphasized this view in the following language: "I should estimate the extent of infection by the milk and flesh of tubercular cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it."

This conclusion was so radically different from the views of most experimenters, and so out of harmony with facts which had apparently been demonstrated by others, that it at once aroused opposition in the congress, followed by the adoption of dissenting resolutions, and led to numerous investigations in various countries. Koch's conclusions were based on his failure to produce tuberculosis in cattle and other animals by inoculating them with tubercular material of human origin, and his success in causing progressive and fatal tuberculosis in the same kinds of animals when inoculated with tubercular material of bovine origin. With such positiveness did

* Report of the Committee on Animal Diseases and Animal Food, presented by the chairman at the meeting of the American Public Health Association, at Washington, D. C., Oct. 27, 1903.

he hold to the constant and specific difference between the human and bovine bacillus that he promulgated an experimental method of discriminating between them. Speaking of the etiology of intestinal tuberculosis in man, he said: "Hitherto nobody could decide with certainty in such a case whether the tuberculosis of the intestines was of human or of animal origin. Now we can diagnose them. All that is necessary is to cultivate in pure culture the tubercle bacilli found in the tubercular material, and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them. For this purpose I recommend subcutaneous injection, which yields quite specially characteristic and convincing results."

These important and comprehensive conclusions followed from very few experiments on animals, and apparently no effort had been made to learn to what extent human tubercle bacilli might differ in their virulence for cattle or what grades of virulence there might be among bacilli of bovine origin. Vagedes had already shown that bacilli were sometimes present in human lesions which were as virulent as bovine bacilli, but his work was ignored by Koch. In the preceding report of this committee reference was made to the work of Ravenel, De Schweinitz, Mohler, DeJong, Delépine, Orth, Stenström, Fibiger and Jensen, Max Wolff, Nocard, Arloing, Behring, and Dean and Todd, all of whom found tubercle bacilli in human lesions which proved to have about the same virulence for cattle and other animals as had the bacilli from bovine animals affected with tuberculosis. Since that report was presented Theobald Smith has reported the finding of a human bacillus virulent for cattle, and there has been made a preliminary announcement by Kossel of the results obtained by the German tuberculosis commission. The statement of Kossel should be given the most careful consideration, coming from a commission appointed on Koch's recommendation, and evidently inclined to favor his views as far as possible in its report.

Kossel stated that the commission had tested seven cultures of tuberculosis from cattle and swine, four of cattle and three of swine. Two of these cultures proved acutely fatal in cattle after 8 to 9 weeks; four of the cultures likewise produced a generalized tuberculosis, but which certainly had a more chronic course; while one of the cultures caused only an infiltration at the point of inoculation, with some caseous foci in the adjoining prescapular gland and in one of the mediastinal glands, and there was lacking the spreading of the tuberculosis over the entire body which they were accustomed to see after the injection of cultures of bovine tuberculosis. "Hence," says Kossel, "among bovine tuberculosis bacilli there can also occur differences with regard to the virulence."

The German commission also tested 39 different freshly made cultures from tuberculous disease in man. Nineteen of these cultures did not produce the slightest symptoms in cattle; with 9 others the cattle exhibited after 4 months minute foci in the prescapular glands which were mostly encapsulated and showed no inclination to progress; with 7 other cases there was somewhat more marked disease of the prescapular glands, but it did not go so far as a material spreading of the process to the glands next adjoining; there were four cultures, however, which were more virulent and caused generalized tuberculosis in the cattle inoculated with them.

It would appear, therefore, that hereafter even Koch must admit that it is impossible always to tell the source of a culture of the tubercle bacillus by its effects when it is inoculated on cattle. One of the bovine cultures failed to produce generalized tuberculosis in cattle and some of the human cultures did produce this form of the disease in such animals; moreover, while some of the human cultures caused no disease at all, others led to the development of minute foci in the prescapular glands, and still others to somewhat more marked disease of these glands. There were, consequently, four degrees of virulence noted in these 39 cultures of bacilli from human sources, and three degrees of virulence in the 7 cultures from animal sources. Now, if we accept the views of Koch as to the specific difference between human and bovine tubercle bacilli, and that the human bacilli produce only localized lesions in cattle, while bovine bacilli produce generalized lesions in these animals, must we not conclude that the one non-virulent bovine culture was in reality of human origin and that the animal from which it was obtained had been infected from man? This is a logical deduction, but reverses the dictum laid down at London that human tuberculosis is not transmissible to cattle. Again, how are we to explain the human cultures of medium virulence? Are they human bacilli which for some unknown reason are increasing in virulence and approaching the activity of the bovine bacillus, or are they really bovine bacilli which have multiplied in the human body until their virulence has become attenuated? In whatever manner these questions are decided, it would seem that the findings of the German commission, instead of supporting Koch's views that we can decide with certainty by the inoculation of cattle as to the source of any given bacillus, really show that this method of diagnosis is extremely uncertain in the present condition of our knowledge.

It is definitely admitted that four of the human cultures caused generalized tuberculosis in cattle; but Kossel suggests that it might be possible that the bacilli in cases of human tuberculosis under certain circumstances could likewise attain a very high pathogenic activity for cattle without being for that reason bovine bacilli. Undoubtedly, the German commission is confronting the two horns of a dilemma, either one of which is fatal to the views of Koch as stated with such positiveness at London. If we accept this suggestion thrown out by Kossel, we must conclude that Koch was wrong in his assertion that human tuberculosis can not be transmitted to cattle, and thus with one blow we destroy the entire experimental support which he had for his argument before the British Congress on Tuberculosis. And if, on the other hand, we accept the conclusion which follows from the principle laid down by Koch for the discrimination between human and bovine bacilli, and which appears to be favored by Kossel, we must admit that bovine tuberculosis is an extremely important factor in the etiology of human tuberculosis. Of the 39 cases of human tuberculosis tested, 4, or over 10 per cent., were virulent for cattle and would be classified as of bovine origin; but these 4 cases were all found among the 16 cases of tuberculosis in children which the commission investigated; hence, it is plain that 25 per cent. of the cases tested of tuberculosis in children would by Koch's method be classified as of bovine origin.

In the Bureau of Animal Industry two distinct lines of experiments have been carried on, in order that one might serve as a check against the other. There has been, however, no discrepancy in the results. De Schweinitz, in the biochemic division, has isolated nine cultures from human tuberculosis. Two of these were

derived from human sputum, three from cases of generalized tuberculosis in adults, and four from cases of generalized tuberculosis in children. By comparing these cultures with a newly isolated virulent culture of bovine tuberculosis, there were found among them two cultures from children which were identical in their cultural and morphological characters with the bovine bacillus. These cultures also killed rabbits and guinea-pigs in as short a time as did the bovine bacillus. Hogs which were inoculated subcutaneously with these two cultures from children died of generalized tuberculosis. Two calves, weighing over 30 pounds each, were inoculated subcutaneously with these virulent human cultures and as a result developed generalized tuberculosis. A yearling heifer inoculated with one of the cultures showed generalized tuberculosis when killed three months after inoculation. Both the cattle and the hogs had been tested with tuberculin and found to be free from tuberculosis before the inoculations were made. It is important to observe in this connection that two out of four, or 50 per cent. of the cultures obtained from cases of generalized tuberculosis in children, proved virulent for cattle.

Mohler, working in the pathological division, has obtained three very virulent cultures of tubercle bacilli from the human subject. A goat inoculated subcutaneously with one of these cultures died in 37 days with miliary tuberculosis of the lungs involving the axillary and prescapular glands. This bacillus was obtained from the mesenteric gland of a boy. Of still greater interest is a bacillus isolated by Mohler from human sputum. A goat inoculated subcutaneously with a culture of this germ died in 95 days of pulmonary tuberculosis. A cat inoculated in the same manner died in 23 days of generalized tuberculosis. A rabbit similarly inoculated died in 59 days of pulmonary tuberculosis. Another rabbit inoculated with a bovine culture for comparison lived 10 days longer than the one inoculated with this sputum germ. Mohler also inoculated subcutaneously a 1-year-old heifer with a culture derived from the tubercular mesenteric gland of a boy 4 years of age. This culture was always refractory in its growth under artificial conditions, and the bacilli were short stubby rods corresponding in appearance with the bovine type. At the autopsy, held 127 days after the inoculation, the general condition was seen to be poor and unthrifty, and large, hard tumors were found at the points of inoculation. On the right side, the swelling measured 3½ by 5 inches, and the corresponding lymph gland was 2¾ inches long by 1¾ inches in diameter. This gland contained numerous calcareous foci, one of these at the apex being an inch in diameter. The lesions on the left shoulder of the animal were very similar to those found on the right side, but the dimensions of the tumor were slightly less. The lungs presented an irregular mass of tubercular nodules, and 7 or 8 grape-like nodules were seen on the parietal pleura. Bronchial and mediastinal lymph glands contained numerous tubercular foci, and the pericardium, peritoneum, spleen and liver were also affected.

In order to throw some light, if possible, on the morphological constancy of the different types of tubercle bacilli, Mohler was requested by the chairman of your committee to make comparative studies of bacilli from various sources, and which had been passed through various species of animals, by making the cultures on dog serum after the method described by Theobald Smith. Some important results have been obtained. One culture of human bacilli which had morphological and cultural peculiarities similar to those of the bovine bacillus, and which only produced local lesions in cattle, was passed through a series of 5 cats. It was then found to be completely changed in its morphological characters, the rods being elongated, slender, more or less beaded and entirely of the human type. But far from decreasing in virulence, as might be expected from their morphological appearance, this bacillus had so increased in its pathogenic activity that it now produced generalized tuberculosis in a cow. This cow was inoculated subcutaneously in front of each shoulder with 2 c.c. of a salt solution emulsion of the tuberculous omentum of the last cat of the series. The cow rapidly lost flesh, had a temperatore of 104° F., with the point of inoculation and adjacent glands greatly swollen. The autopsy revealed generalized tuberculosis, involving the lungs, mediastinal glands, spleen, liver and kidneys. Tubercle bacilli of the bovine type obtained from the mesenteric glands of a sheep, hog and cow were similarly transformed in their morphological appearance after being passed through a series of cats and recovered on dog serum. These bacilli also increased in virulence, as the last cat of the series invariably succumbed in a shorter time than the first of the series.

These experiments and observations indicate that the types of tubercle bacilli are very inconstant, and that under suitable conditions they readily change both in morphology and in virulence. A similar conclusion was reached by other investigators in working with the avian and piscine types of tubercle bacilli several years ago, and was reasonably to have been expected with the human and bovine types.

It must be plain to all from these recent developments, that too much has been made of the slight differences in cultural characteristics, in morphology, and in virulence which have been observed in some cases in comparing the human and the bovine bacilli. The observations were interesting and it was important that they should be followed up until their significance was made entirely clear; but it was an almost unpardonable error, from a sanitary point of view, to promulgate sweeping generalizations, calculated to arrest and abolish important measures for preventing human tuberculosis, before the soundness of these generalizations had been established by a thorough course of experimentation.

When Koch said in the British Congress on Tuberculosis that he should estimate the extent of infection by the milk and flesh of tubercular cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and that he therefore did not deem it advisable to take any measures against it, he went far beyond what was justified by any experiments or observations which he reported, and he did an immense amount of harm which will be manifested for years to come to those who endeavor to guard the human race from the dangers of animal tuberculosis. The researches to which your committee has alluded make these dangers more definite and certain than they have appeared before, and sanitarians should therefore most earnestly endeavor to counteract the erroneous and harmful impression which was made by Koch's address at London and his subsequent address at the International Conference on Tuberculosis at Berlin.

Now that the conclusions of the London address are shown to be incorrect and based on insufficient experimentation, it is well that some attention should be given to the Berlin address in which certain rules were laid

down for testing all clinical evidence before it can be accepted as indicating the transmission of tuberculosis from animals to man. While your committee agrees that it is advisable to scrutinize clinical evidence as carefully as possible before it is accepted as influencing the decision of such an important question, consistency demands that we should accept clinical evidence bearing on the transmission of bovine tuberculosis to man on the same terms that we accept evidence bearing on the transmission of tuberculosis from man to man. For instance, Koch said in his London address, "So the only main source of the infection of tuberculosis is the sputum of consumptive patients." How does he know this? Has he any evidence to support this conclusion which will stand the requirements which he has laid down for those who oppose his views with reference to the transmission of animal tuberculosis to man? If so, this evidence has not yet been presented. Your committee believes that the principal source of tuberculosis in man is infection from other tuberculous human subjects, but it also believes that a considerable proportion of the cases of tuberculosis in man is due to infection from animal sources; and in weighing the evidence by which we are to fix more rigorously the relation which these two sources of infection bear to each other, it is logical that we should apply the same rules of evidence in each case.

The rules which Koch formulated for testing the evidence as to bovine infection are given below, with such brief comments as your committee feels they deserve.

"1. Certain proof of tubercle, and where possible the primary focus must be supplied."

To this condition no objection is raised, but it should be remarked that the location of the primary focus, which is made so much of, is of little value in determining the origin of the infection. It has been clearly shown by various investigators, whose work has been referred to in the preceding reports of this committee, that tubercle bacilli may pass through the walls of the intestine without producing any lesion at the point of entrance, and that their first point of lodgement and multiplication may be the mesenteric glands, the liver, spleen or even the lungs. On the other hand, Koch has told us that the location of the primary lesion in the intestine is of no significance because human as well as animal bacilli may be swallowed and may be the cause of such lesions. It is, therefore, not at all apparent that this is an essential point.

"2. Other sources of infection must be excluded with certainty."

This condition appears to exclude all clinical evidence bearing on the source of tubercular infection. How is it possible to prove that any given individual has not been exposed to the bacilli of human tuberculosis? And, for the same reason, how is it possible to prove that any given individual has not been exposed to the bacilli of animal tuberculosis? It may be said that this consumptive person had habitually been in a room with another consumptive patient and was infected from that patient. But how can you prove that this person never ate any tuberculous meat, never partook of any tuberculous milk, never ate any butter containing the tubercle bacillus, never had opportunity to be indirectly infected from the hands of cooks or from table utensils which had been in contact with tuberculous meat, milk, or butter, and was never exposed to the infection scattered in so many ways by tuberculous animals? It is impossible to exclude with certainty all these sources of infection, and if we apply the condition under discussion to the evidence on which Koch based the assertion that the main source of the infection of man is the sputum of consumptive patients, we would find no part of it that would stand the test. Now, is it logical to accept clinical evidence, as to the transmission of tuberculosis from man to man, by one set of rules, and to require an entirely different set of rules when considering evidence as to the transmission of the same disease from animals to man? Your committee is of the opinion that clinical evidence should be regarded as valuable in confirming experimental researches, or in indicating the probable facts where experimentation has been insufficient or is impossible, but that it is too much to expect that clinical evidence will be forthcoming as to the transmission of tuberculosis which will exclude all possible sources of error.

"3. In each case of alleged infection from milk affected with bovine tuberculosis the condition of the rest of the people who have taken the same milk should be borne in mind. These fellow consumers form to a certain extent a control experiment, and if of the numerous people who have drunk the suspected milk only a single one sickens, this weighs decidedly against the belief that this one person was infected by the common food."

This condition, also, is regarded by your committee as illogical and impossible of general application without discarding all clinical evidence on this question. If we apply it to the alleged cases of sputum infection, we find it is seldom, indeed, that the disease in more than one person can be traced with any probability to the same tuberculous patient, although scores of persons may have been exposed to that patient. Most people who escape tuberculosis have nevertheless been exposed many times to tuberculous patients, but this is not sufficient reason for concluding that others have not contracted the disease by similar exposure. Tuberculosis is a disease which is communicated with such difficulty among people under ordinary conditions of life, either by exposure to diseased persons or to tuberculous food, develops so slowly, and varies so much in the period which elapses before symptoms are observed, that it is only very rarely that groups of cases are observed which even appear to have originated from the same source. And yet, how erroneous it would be to exclude clinical evidence suggesting contagion because only one of those exposed to a certain consumptive had contracted the malady.

"4. The source of the milk should be attended to. Since in recent years it has become more and more evident that milk containing tubercle bacilli is yielded by such cows as suffer from tuberculosis of the udders, the general statement that some one has drunk milk from a cow suffering from tuberculosis no longer suffices to prove to us that bovine tuberculosis bacilli have really reached his digestive organs. It must be from a cow suffering from tuberculosis of the udder, and therefore a statement on this subject should not be wanting in a report on milk infection if it is said to be complete."

Your committee finds this statement of fact to be incorrect, since the tendency of recent investigations by competent persons is to make it more and more evident that cows with tuberculosis may yield milk containing tubercle bacilli when the udders present no signs of the disease. The argument is, therefore, antiquated. Of the many experiments that have been made to determine the proportion of tuberculous cows which yield infectious milk, the average results are about 15 per cent, while the cases of tuberculosis of the udder are about 2 per cent. In recent investigations made by Mohler of the Bureau of Animal Industry with 56 reacting cows, it was

found that 12 of these, or 21.4 per cent., at one time or another during the experiment gave milk which contained virulent tubercle bacilli. Undoubtedly cows with tuberculosis of the udder yield milk containing a larger number of tuberculosis bacilli than do those in which the udder remains unaffected and are, therefore, more dangerous, but it has been clearly shown that other tuberculous cows may yield virulent milk.

So much for the conditions laid down by Koch for testing clinical evidence bearing on the transmission of tuberculosis from animals to man. The effort to rule out all such evidence by applying impossible tests does not meet with our approval, but fortunately clinical evidence is no longer necessary for deciding the question. The subcutaneous injection of cattle with pure cultures of the tuberculosis bacillus from human sources, which, according to Koch, "yields quite specially characteristic and convincing results," has proved, in the hands of the German commission no less than in those of independent investigators, that bovine tuberculosis is communicable to man. It will require much work to decide with even approximate accuracy the proportion of human tuberculosis caused by animal infection; but the fact that 25 per cent. of the cases in children investigated by the German commission, and 50 per cent. of similar cases investigated by De Schweinitz showed by this test that they were caused by animal infection, is sufficient to convince us that measures should be taken and enforced at once to guard against infection from this source.

In concluding your committee desires to express its appreciation of the prompt, intelligent and indefatigable work of those scientific investigators who took up this question immediately after it was brought to the front at London, and who, in the comparatively short period of two years, have furnished the material for definitely settling it, so far as the principal contention is concerned.

THE CONDITION OF THE BLOOD IN PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS.*

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The study of the blood in the patients who furnished the material for this paper was made possible by the kindness of Dr. Julius L. Salinger, who placed his tuberculosis ward in the Philadelphia Hospital at my disposal. The paper is based on the counting of the erythrocytes, the counting of the leucocytes, the estimation of the hemoglobin, the differential count of the leucocytes and the search for the iodin reaction of the leucocytes in twenty-five cases of pulmonary tuberculosis, and one case of extensive cavity formation in the lung due to bronchiectasis.

In studying the results of these blood counts I shall adopt the classification of Grawitz,[1] who divides the disease into three stages. A first stage, in which there is a beginning affection of the apex, without cavity formation; a second stage, in which there are symptoms of cavity formation with slight fever or without fever; and a third stage in which hectic fever is present.

FIRST STAGE.

There is one patient (26) who represents the first stage of consolidation of the apex, without cavity formation. This patient showed a slight reduction of the erythrocytes to 3,980,000; a normal number of leucocytes, 10,000; and a moderate reduction of hemoglobin to 70 per cent. This patient improved very much under treatment, and was finally discharged without symptoms and with few physical signs. As his general condition improved there was a corresponding improvement in the blood picture; the erythrocytes rose to 4,580,000 and the hemoglobin increased to 82 per cent. With the improvement of the blood condition, the leucocytes rose to 16,600.

An examination of the differential leucocyte count of this patient shows that the relative proportion of the different cells was not changed. The treatment, under which the patient greatly improved, apparently caused an increase in the eosinophiles from 1.6 to 3 per cent.

SECOND STAGE.

There are eight patients (2, 4, 5, 6, 10, 14, 20, 22) representing the second stage of the disease. In these cases the erythrocytes were usually normal in number. In four instances they were present in greater numbers than 5,000,000 to the cubic millimeter, and in one instance they only numbered 3,680,000. The range of the erythrocyte counts was from 6,710,000, in a negro who had complained of cough for twelve years, to 3,680,000, also in a negro, who had been ill for two and one-half months, and who had albuminuria.

Seven of these patients showed a leucocytosis, varying from 34,000 to 11,120, and one showed a leucopenia of 7,100. The latter patient had carried a cavity in his right lung for a number of years and the disease was stationary.

In these patients the differential counts showed, as a rule, a percentage of polymorphonuclear cells above 80, the highest being 93.4. In three cases the polymorphonuclears formed 70.4 per cent., 73.6 per cent., and 78.8 per cent of the leucocytes, respectively. In one patient the first examination was made during an asthmatic paroxysm and showed 80.8 per cent of polymorphonuclear cells. A second examination was made about four weeks later, after the asthmatic paroxysms had ceased, and gave 78 per cent. of polymorphonuclear cells. Eosinophile cells were present in all of these patients except two, in proportions varying from 3 per cent. to 0.2 per cent. The two patients from whose blood these cells were absent left the hospital before a second examination could be made and their ultimate fate is unknown.

The hemoglobin varied from 90 per cent to 63 per per cent., although all patients showed some pallor of the skin and the mucous membranes. Indeed, in some instances the percentage of hemoglobin was at first thought to have been erroneously estimated until more than one trial showed the reading to be accurate.

THIRD STAGE.

There are fifteen patients (3, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19, 21, 23, 25) who may be placed in the third stage of the disease—that of hectic fever. In these patients the erythrocytes were usually reduced in number, although a normal number of these cells was occasionally found. The counts ranged from 5,710,000 to 2,890,000, with an average of about 4,019,130. The highest count was obtained from a patient who was rapidly improving under treatment; indeed, he might be placed in the second stage of the disease but for the fact that a former count was made while he was having marked hectic fever. The leucocytes were usually in-

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* Read before the Philadelphia County Medical Society.

1. E. Grawitz: Deutsche med. Woch., 1893, No. 51, p. 1374.

creased in number, giving a leucocytosis of from 247,000 in a very rapidly progressing case, to 10,080. Five patients gave a leucocyte count below 10,000; 8,480, 7,600. 7,600 to 9,600, and 6,733, respectively. The polymorphonuclear cells were usually above 80 per cent., varying from 97.6 per cent. to 80 per cent. In five instances these cells formed less than 80 per cent of the entire number of the leucocytes, varying from 78.8 per cent. to 69 per cent. The eosinophile cells were usually absent from the blood of those cases that proved fatal. The hemoglobin varied from 95 per cent. in a patient who was improving on treatment, to 35 per cent. A rise in the hemoglobin percentage was usually noted just before death, and was attributed to the sluggishness of the peripheral circulation as the end approached.

In the case of a patient who failed rapidly and who died about forty-three days after admission, the erythrocytes numbered 3,800,000, 3,820,000, 3,020,000, and the day before death, 4,600,000. In this patient the leucocytes were always below 10,000; 7,600, 7,000, 6,300, rising the day before death to 9,600. The hemoglobin varied from 50 per cent., 55 per cent., 55 per cent. to 85 per cent. the day before death. The percentage of polymorphonuclear cells was 77.2 per cent., 80 per cent., 78.8 per cent. and 80 per cent., respectively. When the blood was first counted, there was 0.4 per cent. of eosinophiles, but twenty-four days later these elements had disappeared and were not again found in the peripheral blood.

COMPLICATIONS.

The series of cases comprising this study contains two cases of pulmonary hemorrhage, six cases of albuminuria, two cases of tuberculous diarrhea, five cases of pleurisy and one case of asthma.

HEMORRHAGE.

One patient (11) had been spitting blood for two weeks and had had two distinct hemorrhages, the last one a few days before the blood examination was made. The hemoglobin suffered a marked reduction (55 per cent.); the erythrocytes numbered 5,220,000; there was no leucocytosis (8,480). There were no nucleated erythrocytes, and the differential count showed nothing abnormal.

The second patient (23) had two hemorrhages on May 25. May 28 his hemoglobin was 55 per cent.; there was a leucocytosis of 15,800, but the erythrocytes numbered 4,380,000. The lymphocytes were reduced to 7 per cent., and there were 14.4 per cent. of transitional forms. The man had a third hemorrhage on May 30, and two days later the erythrocytes numbered 3,430,000, there was a leucocytosis of 20,700, and the hemoglobin was reduced to 55 per cent. There were no nucleated erythrocytes.

ALBUMINURIA.

Albuminuria seems to have little if any influence on the blood picture. Of the six cases (3, 10, 13, 16, 18, 20) in which this complication was noted, the erythrocytes varied from 6,710,000 to 2,890,000. The leucocytes varied from 24,240 to 7,600. The hemoglobin varied from 37 per cent. to 90 per cent. The polymorphonuclear cells formed more than 80 per cent. of the total number of leucocytes except in two instances. Eosinophile cells were absent from the peripheral blood in all except two instances.

TUBERCULOUS DIARRHEA.

Two patients (3 and 9) suffered from tuberculous diarrhea. In both of these patients the erythrocytes were reduced and the leucocytes were increased in number; the hemoglobin was markedly reduced and the polymorphonuclear cells formed more than 80 per cent. of the total number of leucocytes.

PLEURISY.

Of the five cases (3, 12, 16, 22, 25) of pleurisy, the most constant feature of the blood examination was the leucocytosis. One patient (16) did not show the reaction, his leucocytes only numbering 8,100. In the others the leucocytes varied from 10,600 to 34,000. The polymorphonuclear cells constituted the bulk of the leucocytes in these cases.

Case 24 presented non-tuberculous cavities in the posterior portions of both lungs. This patient's blood count was as follows: erythrocytes, 4,750,000; leucocytes, 15,400; hemoglobin, 70 per cent. The polymorphonuclear cells formed 81.2 per cent. of the leucocytes and there were 1.8 per cent. eosinophiles.

IODOPHILIA.

I did not succeed in demonstrating the iodin reaction in any of my specimens. Locke[2] has found this reaction absent in uncomplicated tuberculosis, but DaCosta[3] has found it present in septic cases.

EOSINOPHILIA.

As the study progressed, my attention was attracted by the fact that eosinophile cells were not to be found in many of the specimens, and it soon became apparent that the cases in which these cells were absent were fatal ones. There are five exceptions to this, however. Case 9 at the time of examination showed 0.4 per cent. of eosinophiles and he is known to have died, although how long after the examination I am unable to say. Case 12 showed 0.8 per cent. eosinophiles four weeks before death; but when a second examination was made, two weeks before death, no eosinophile cells were present. Case 17 showed 0.4 per cent. eosinophiles forty-two days before death, but examinations made seventeen, six and one day before death showed absence of eosinophiles. Case 24 showed 1.8 per cent. eosinophile cells, and the patient died after a surgical operation for the drainage of non-tuberculous pulmonary cavities.

Cases 6, 7 and 10 showed absence of eosinophiles when the blood was examined, but these patients left the hospital and their fate is unknown.

Cases 25 and 26 were under treatment, which apparently produced much improvement in the physical conditions of the patients. In these patients the eosinophiles increased as improvement progressed; in 25 rising from 0.2 on the first examination to 1.6 per cent. on the second; in 26 rising from 1.6 per cent. to 3 per cent.

I am inclined to believe that the presence or absence of eosinophiles in the peripheral blood of tuberculous patients is a sign of some prognostic significance. Levaditi[4] makes the following statement: "Tuberculin, among the bacterial products, appears to have eosinophilous properties. Jürgens has already shown in tuberculous patients who succumbed in the course of treatment with tuberculin, an increase of the number of white cells of the blood. Tschistowitch, Grawitz, Bäschoff and Botkin examined the blood during life and discovered quantities of eosinophiles much above normal. This oxyphilia appeared also, according to the more re-

2. Edwin A. Locke: Boston Med. and Surg. Jour., Sept. 11, 1902.
3. John C. DaCosta, Jr.: Clinical Hematology, 1901.
4. C. Levaditi: Le Leucocyte et ses Granulations, Paris, October, 1902, p. 117.

cent statements of Bettman, in the course of the treatment of tuberculosis with tuberculin and with cinnamic acid." Zappert[5] also found an increase of eosinophile cells after injections of tuberculin; but in four out of eight cases of pulmonary tuberculosis these cells were reduced in number, and in another of the eight cases they were absent. There is no note as to the ultimate fate of these five patients.

Claude and Aly-Zaky[6] say that treatment of experimental tuberculosis in guinea-pigs produced changes in the blood formula as seen in control animals. In those animals in which treatment has resulted in deferring the fatal termination, the eosinophiles have been found increased, even as high as 12 per cent. in some cases, particularly in the period of initial reaction to the infection.

Cabot[7] says that in most cases associated with leucocytosis, eosinophiles are absent. They may be increased in cases with cavities in which possibly the individual inoculates himself with tuberculin manufactured in the cavities of his own lungs.

Brown[8] quotes Teichmüller's statement that an increase of the eosinophiles in the blood and in the sputum of tuberculous patients is a favorable prognostic sign. Brown himself agrees with the observation of Teichmüller that the percentage or absolute number of eosinophile cells present is of real value in the prognosis of tuberculosis. Teichmüller's[9] work was done on sputum which he stained by various methods, principally by eosin and methyl blue. He believes that in bad cases eosinophile cells are usually absent from the sputum, although an isolated cell may be found occasionally. He considers the study of the eosinophile cells in sputum an indispensable aid. It gives a method of estimating the resisting power of the patient, of determining the prognosis and of critically estimating the value of special therapy.

Ehrlich and Lazarus[10] account for the occurrence of a polymorphonuclear leucocytosis by the chemotactic influence of certain bacterial products. The neutrophile cells are the ones ordinarily drawn from their storehouse in the bone marrow by this chemotactic influence of substances circulating in the blood stream.

The majority of the bacterial products are positively chemotactic for the neutrophile cells, while only a few substances, among which tuberculin is included, according to the observations of the authors just quoted, are positively chemotactic for the eosinophile cells. The variation of the eosinophile cells in the circulating blood of tuberculous patients may be explained as follows: In cases of incipient tuberculosis eosinophile cells are present in the blood stream in about normal proportion, because there is not enough tuberculin manufactured in the lesions to produce a marked eosinophilia. When, however, the secondary infection with the organisms of suppuration occurs, the neutrophile cells are attracted by the chemotactic power of the products of their growth which circulate in the blood and the eosinophile cells are repelled, so that we find an excess of polymorphonuclear neutrophile cells in the peripheral blood. As the patient gradually becomes more saturated with the latter poisons and the fatal termination approaches, the eosinophiles progressively diminish in number and disappear from the peripheral blood. If, however, the progress of the case is influenced favorably by treatment, the symptoms of the secondary infection disappear and the chemotactic influence of the products of the pyogenic organisms is withdrawn, so that the tuberculin being produced in the lesions may exercise its chemotactic influence to attract the eosinophilous polymorphonuclear cells from the bone marrow into the blood stream.[11]

A summary of the cases follows:

CASE 1.—W. T., aged 49 years, negro. March 3, 1902, 3:30 p. m.: Patient comatose, temperature 101.6. Erythrocytes, 4,437,500; leucocytes, 4,900; ratio, 1-905; hemoglobin, 95 per cent. Differential count, polymorphonuclears, 72.4 per cent.; lymphocytes, 16 per cent.; transitionals, 11.6 per cent.; eosinophiles, 0.0 per cent. Iodin reaction negative. Patient died two and a half hours after making blood examination.

CASE 2.—C. K., aged 48 years, white. March 5, 1902, 3 p. m.: Temperature 98.4 per cent. Erythrocytes, 5,890,000; leucocytes, 16,160; ratio, 1-364; hemoglobin, 90 per cent. Differential count, polymorphonuclears, 78.8 per cent.; lymphocytes, 12.2 per cent.; transitionals, 7.8 per cent.; eosinophiles, 1.2 per cent. Iodin reaction negative. Discharged from hospital.

CASE 3.—T. B., aged 46 years, white. History: Cough and expectoration for eight months. Diarrhea for seven weeks. Nine stools a day. Cavity at right apex. Right lung completely consolidated. Pleuritis extensive. Left lung many areas of consolidation. Appearance anemic. Much emaciated. Heart displaced to right by adhesions. Urine contained albumin and hyaline casts. March 17, 1902: Sputum contained tubercle bacilli, diplococci, streptococci, pus cells, alveolar epithelium. March 5, 1902, 4 p. m.: Temperature 102. Erythrocytes, 2,890,000; leucocytes, 24,240; ratio, 1-118; hemoglobin, 53 per cent. Differential count, polymorphonuclears, 88.8 per cent.; lymphocytes, 4 per cent.; transitionals, 7.2 per cent; eosinophiles, 0.0 per cent. Iodin reaction negative. March 14, 1902, 3:30 p. m.: Temperature 100. Erythrocytes, 3,200,000; leucocytes, 20,240; ratio, 1-158; hemoglobin, 37 per cent. Differential count, polymorphonuclears, 87.2 per cent.; lymphocytes, 6.6 per cent.; transitionals, 6.2 per cent.; eosinophiles, 0.0 per cent. Iodin reaction negative. Died March 20, 1902.

CASE 4.—E. M., aged 72 years, white. History: Patient has been in the tuberculosis ward for a long time. Has a very slow tuberculous process. March 10, 1902, 2:30 p. m.: Temperature, 98. Erythrocytes, 5,260,000; leucocytes, 14,800; ratio, 1-355; hemoglobin, 90 per cent. Differential count, polymorphonuclears, 80.4 per cent.; lymphocytes, 8 per cent.; transitionals, 10.4 per cent.; eosinophiles, 1.2 per cent. Iodin reaction negative. May 8, 1902: Erythrocytes, 4,720,000; leucocytes, 11,500; ratio, 1-410; hemoglobin, 85 per cent. Differential count, polymorphonuclears, 77 per cent.; lymphocytes, 17 per cent.; transitionals, 3 per cent.; eosinophiles, 3 per cent. Iodin reaction negative.

CASE 5.—B. McS., aged 42 years, white. History: Patient has been in the wards of the Philadelphia Hospital several times. Has frequent asthmatic paroxysms. March 10, 1902, 3:30 p. m.: Temperature 98.4 during an asthmatic paroxysm. Erythrocytes, 4,520,000; leucocytes, 29,760; ratio, 1-151; hemoglobin, 83 per cent. Differential count, polymorphonuclears, 80.8 per cent.; lymphocytes, 13.6 per cent.; transitionals, 2.6 per cent.; eosinophiles, 3 per cent. Iodin reaction negative. April 14, 1902, 3:30 p. m.: Patient recovered from his asthmatic attacks, is out of bed every day, and goes out into the yard.

5. Zappert: Zeit. f. klin. Med., vol. xxiii, 1893.

6. H. Claude and Aly-Zaky: Gaz. Heb. de Méd. et de Chirur., May 15, 1902.

7. Richard C. Cabot: A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. Fourth edition, 1901.

8. Thomas R. Brown: Med. News, June 13, 1903.

9. W. Teichmüller: Deutsch. Archiv f. klin. Med., vol. lx, pp. 579 and 63.

10. P. Ehrlich and A. Lazarus: Histology of the Blood. Normal and Pathological. Vol. viii, Nothnagel's specielle Pathologie und Therapie. English Translation by W. Myers, Cambridge, 1900.

11. In addition to those already mentioned I have consulted the following authors: L. Appelbaum: Berl. klin. Woch., Jan. 6, 1902. Martin L. Stevens: Med. Rec., July 26, 1902. Alfred C. Coles: The Blood; How to Examine and Diagnose Its Diseases, London, 1902. Rud. R. v. Limbeck: The Clinical Pathology of the Blood; English Translation by Arthur Latham and John Nachbar, New Sydenham Society, 1901. H. Strauss and R. Rohnstein: Die Blutzusammensetzung bei den verschiedenen Anäm., Berlin, 1901.

Temperature, 99; pulse, 92; respiration, 22. Erythrocytes, 4,610,000; leucocytes, 14,500; ratio, 1-318; hemoglobin, 80 per cent. Differential count, polymorphonuclears, 78 per cent.; lymphocytes, 12.4 per cent.; transitionals, 8.6 per cent.; eosinophiles, 1 per cent. Iodin reaction negative. Patient was finally discharged improved and was readmitted during the winter of 1902-03 for the same condition.

CASE 6.—G. S., aged 41 years, white. History: Cavity formation. March 10, 1902, 4:30 p. m.: Temperature 99.8. Erythrocytes, 4,210,000; leucocytes, 11,120; ratio, 1-378; hemoglobin, 63 per cent. Differential count, polymorphonuclears, 80.2 per cent.; lymphocytes, 10.2 per cent.; transitionals, 9.6 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient refused to remain in the hospital.

CASE 7.—H. T., aged 32 years, black. History: Cavity formation at right apex. March 12, 1902, 3:15 p.m.: Temperature 100.4. Erythrocytes, 3,730,000; leucocytes, 10,080; ratio, 1-370; hemoglobin, 35 per cent. Differential count, polymorphonuclears, 89.2 per cent.; lymphocytes, 6.6 per cent.; transitionals, 4.2 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient left the hospital of his own accord.

CASE 8.—W. M. G., aged 47 years, white. History: Cavity formation both apices. March 12, 1902, 4:00 p. m.: Temperature, 100.2. Erythrocytes, 3,580,000; leucocytes, 20,240; ratio, 1-176; hemoglobin, 35 per cent. Differential count, polymorphonuclears, 76 per cent.; lymphocytes, 18 per cent.; transitionals, 5 per cent.; eosinophiles, 1 per cent. Iodin reaction negative. Patient subsequently left the hospital.

CASE 9.—W. B., aged 34 years, white. History: Patient has been sick for 14 months complaining of cough, night sweats, loss of flesh and diarrhea. Six stools daily. Much expectoration. Consolidation of both apices with cavity formation. March 19, 1902: Sputum shows tubercle bacilli, cocci, alveolar epithelium and pus cells. 2:30 p. m., temperature 101. Erythrocytes, 4,240,000; leucocytes, 13,440; ratio, 1-315; hemoglobin, 42 per cent. Differential count, polymorphonuclears, 88.8 per cent.; lymphocytes, 6 per cent.; transitionals, 4.8 per cent.; eosinophiles, 0.4 per cent. Iodin reaction negative. Patient died.

CASE 10.—W. T., aged 30 years, black. History: Patient has been sick 2½ months suffering from dyspnea, cough and expectoration. Consolidation of both apices. Albuminuria. History of chills and fever 2½ years ago. March 19, 1902, 3:30 p. m.: Temperature 97.8. Erythrocytes, 3,680,000; leucocytes, 23,760; ratio, 1-154; hemoglobin, 90 per cent. Differential count, polymorphonuclears, 85.4 per cent.; lymphocytes, 10.8 per cent.; transitionals, 3.8 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient left hospital.

CASE 11.—D. W., aged 20 years, black. History: Complains of cough and expectoration of 4 months' duration with paroxysmal diarrhea and night sweats. Two weeks ago began to spit up blood, and has had 2 distinct hemorrhages. No chest pain. Consolidation at right apex. March 21, 1902. Sputum examination shows tubercle bacilli, pus cells and few cocci. 2:30 p. m., temperature 100. Erythrocytes, 5,220,000; leucocytes, 8,480; ratio, 1-615; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 73.2 per cent.; lymphocytes, 20.4 per cent.; transitionals, 5.4 per cent.; eosinophiles, 1 per cent. Iodin reaction negative. Patient discharged improved.

CASE 12.—R. C., aged 23 years, white. History: Influenza in February, 1902; this was followed by night sweats, cough at night and expectoration. Consolidation at right apex, no cavity. March 28, 1902: Sputum showed tubercle bacilli. 3:30 p. m., temperature, 99; pulse, 130; respiration, 26. Erythrocytes, 4,600,000; leucocytes, 20,480; ratio, 1-224; hemoglobin, 57 per cent. Differential count, polymorphonuclears, 85.2 per cent.; lymphocytes, 8.4 per cent.; transitionals, 5.6 per cent.; eosinophiles, 0.8 per cent. Iodin reaction negative. April 7, 1902, 3:00 p. m.: Temperature, 98.4; pulse, 124; respiration, 24. Consolidation of right apex; no cavity could be made out. Erythrocytes, 4,140,000; leucocytes, 25,600; ratio, 1-161; hemoglobin, 56 per cent. Differential count, polymorphonuclears, 91.8 per cent.; lymphocytes, 6 per cent.; transitionals, 2.2 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. April 21, 1902: Diaphragmatic pleurisy developed, and patient died April 22.

CASE 13.—P. M., aged 32 years, white. History: Complains of night sweats, cough and expectoration. Urine contains albumin. He was treated in the Pennsylvania Hospital from February 7 to March 19, 1902. Examination of sputum on February 8 showed cocci, but no tubercle bacilli; on February 14 tubercle bacilli were found. March 31, 1902, 3:00 p. m.: Temperature, 99; pulse, 80; respiration, 36. Erythrocytes, 4,620,000; leucocytes, 7,600; ratio, 1-607; hemoglobin, 73 per cent. Differential count, polymorphonuclears, 82.8 per cent.; lymphocytes, 14 per cent.; transitionals, 2.8 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. April 14, 1902, 2:45 p. m.: Temperature, 99; pulse, 80; respiration, 24. Erythrocytes, 4,200,000; leucocytes, 10,200; ratio, 1-411; hemoglobin, 90 per cent. Differential count, polymorphonuclears, 77.6 per cent.; lymphocytes, 18.8 per cent.; transitionals, 3.2 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient died.

CASE 14.—J. K., aged 44 years, white. History: Has had a cavity at the right apex for a number of years. The disease is non-progressive. March 31, 1902: Sputum contains tubercle bacilli and cocci. 4:00 p. m.: Temperature, 98; pulse, 84; respiration, 32. Erythrocytes, 4,440,000; leucocytes, 7,100; ratio, 1-625; hemoglobin, 75 per cent. Differential count, polymorphonuclears, 70.4 per cent.; lymphocytes, 20.4 per cent.; transitionals, 7.2 per cent.; eosinophiles, 2 per cent. Iodin reaction negative. Patient left the hospital improved, but still retaining the symptoms and signs of a cavity.

CASE 15.—J. H., aged 33 years, white. History: Complains of cough, expectoration and great debility of 9 weeks' duration. Both apices involved; cavity at right apex; pneumonic area at left base. No diarrhea. April 15, 1902: Sputum contains tubercle bacilli and cocci. 2:30 p. m.: Temperature, 100.2; pulse, 150; respiration, 50. Erythrocytes, 4,200,000; leucocytes, 247,000; ratio, 1-17; hemoglobin, 60 per cent. Differential count, polymorphonuclears, 97.6 per cent.; lymphocytes, 2 per cent.; transitionals, 0.4 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient died at 2 a. m., April 16.

CASE 16.—S. F., aged 29, black. History: Has been sick for 2 years. There is a cavity at the left apex; an area of consolidation at the right apex; pleuritis at both bases. General bronchitis, albuminuria, edema of the feet and laryngitis. No diarrhea. April 18, 1902: Sputum contains tubercle bacilli. 2:30 p. m., temperature, 102.4; pulse, 100; respiration, 22. Erythrocytes, 3,120,000; leucocytes, 8,100; ratio, 1-385; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 87 per cent.; lymphocytes, 8 per cent.; transitionals, 5 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient died April 22.

CASE 17.—E. F., aged 19 years, black. History: Patient has been sick for 3 months. Complains of cough, expectoration and chest pains. No diarrhea. Both apices involved; cavity of the right apex. April 21, 1902, 3:00 p. m.: Temperature, 102.6; pulse, 84; respiration, 44. Erythrocytes, 3,800,000; leucocytes, 7,600; ratio, 1-500; hemoglobin, 50 per cent. Differential count, polymorphonuclears, 77.2 per cent.; lymphocytes, 16 per cent.; transitionals, 6.4 per cent.; eosinophiles, 0.4 per cent. Iodin reaction negative. May 15, 1902. Patient has extensive pleuritis on right side. Bronchitis on both sides. 3:00 p. m.: Temperature, 101.4; pulse, 132; respiration, 34. Erythrocytes, 3,820,000; leucocytes, 7,000; ratio, 1-545; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 80 per cent.; lymphocytes, 16.2 per cent.; transitionals, 4 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. May 26, 1902: Patient is very weak and is confined to his bed. 3:30 p. m., temperature, 101.4; pulse, 132; respiration, 34. Erythrocytes, 3,020,000; leucocytes, 6,300; ratio, 1-479; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 78.8 per cent.; lymphocytes, 19.2 per cent.; transitionals, 2 per cent.; eosinophiles, 0 per cent. Iodin reaction

negative. June 1, 1902, 11:45 a. m.: Temperature, 98; pulse, 104; respiration, 28. Flow of blood sluggish. Patient very weak. Erythrocytes, 4,600,000; leucocytes, 9,600; ratio, 1-423; hemoglobin, 85 per cent. Differential count, polymorphonuclears, 80 per cent.; lymphocytes, 19.2 per cent.; transitionals, 0.8 per cent.; eosinophiles, 0 per cent. Iodin reaction negative. Patient died June 2.

CASE 18.—J. P., aged 46 years, white. History: Complains of cough, hemorrhages, dyspnea and chest pain for 6 months. Involvement of both apices; cavity in posterior part of right apex. Hemorrhage on April 25, 1902. Has edema of the legs with albuminuria and casts. May 6, 1902, 2:30 p. m.: Temperature, 96.4; pulse, 108; respiration, 44. Erythrocytes, 4,010,000; leucocytes, 10,700; ratio, 1-375; hemoglobin, 75 per cent. Differential count, polymorphonuclears, 87.4 per cent.; lymphocytes, 7.4 per cent.; transitionals, 3.4 per cent.; eosinophiles, 1.8 per cent. Iodin reaction negative. Patient died.

CASE 19.—A. R., aged 22 years, white, complains of cough and loss of strength of one year's duration. Consolidation of right apex and left base. May 8, 1902, 2 p. m.: Temperature, 101.6; pulse, 108; respiration, 40; erythrocytes, 4,280,000; leucocytes, 6,733; ratio, 1-635; hemoglobin, 70 per cent. Differential count, polymorphonuclears, 81.2 per cent.; lymphocytes, 12.4 per cent.; transitionals, 6.4 per cent; eosinophiles, 0 per cent. Iodin reaction negative. Died May 16, 1902.

CASE 20.—W. C., aged 29 years, black. History: Complains of cough of 12 years' duration. Night sweats and free expectoration. Signs of cavity at right apex. No tubercle bacilli found, however. Sputum contains many cocci and elastic tissue. Urine contains a trace of albumin. May 13, 1902, 3:00 p. m.: Temperature, 98.6; pulse, 92; respiration, 24. Erythrocytes, 6,710,000; leucocytes, 12,400; ratio, 1-541; hemoglobin, 72 per cent. Differential count, polymorphonuclears, 73.6 per cent.; lymphocytes, 20.6 per cent.; transitionals, 5.4 per cent.; eosinophiles, 0.4 per cent. Iodin reaction negative. Patient left the hospital.

CASE 21.—R. W., aged 35 years, white. History: Has had a cough for one year. Hemorrhage 7 months ago. Has locomotor ataxia. Cavity at right apex. Left lung not involved. May, 26, 1902, 2:30 p. m.: Temperature, 99.6; pulse, 120; respiration, 30. Erythrocytes, 5,240,000; leucocytes, 23,500; ratio, 1-223; hemoglobin, 85 per cent. Differential count, polymorphonuclears, 69 per cent.; lymphocytes, 22.6 per cent.; transitionals, 8 per cent.; eosinophiles, 0.4 per cent. Iodin reaction negative.

CASE 22.—W. R., aged 38 years, white. History: Complains of cough and loss of flesh of 6 months' duration. Cavity at right apex, extensive pleuritis at left base posteriorly. Slight bronchitis. May 27, 1902: Sputum contains pus, epithelium, mucus, tubercle bacilli, diplococci, streptococci and bacilli. 11:45 a. m., temperature, 98.4; pulse, 108; respiration, 28. Erythrocytes, 5,420,000; leucocytes, 34,000; ratio, 1-156; hemoglobin, 65 per cent. Differential count, polymorphonuclears, 93.4 per cent.; lymphocytes, 3.6 per cent.; transitionals, 2.8 per cent.; eosinophiles, 0.2 per cent. Iodin reaction negative.

CASE 23.—F. C., aged 44 years, black. History: Complains of cough and the expectoration of blood. Had two hemorrhages on May 25 and has expectorated blood since. No night sweats, no diarrhea. Signs of cavity at left apex. May 28, 1902: Sputum contains alveolar epithelium, pus, red blood corpuscles, cocci and bacilli. No tubercle bacilli found. 11:30 a. m., temperature, 98; pulse, 80; respiration, 20. Erythrocytes, 4,380,000; leucocytes, 15,800; ratio, 1-277; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 78 per cent.; lymphocytes, 7 per cent.; transitionals, 14.4 per cent.; eosinophiles, 0.6 per cent.; no nucleated red cells. Iodin reaction negative. Patient had a hemorrhage on May 30, 1902. June 1, 1902, 10:40 a. m.: Temperature, 100.2; pulse, 80; respiration, 24. Erythrocytes, 3,430,000; leucocytes, 20,700; ratio, 1-165; hemoglobin, 55 per cent. Differential count, polymorphonuclears, 70 per cent.; lymphocytes, 20.8 per cent.; transitionals, 7.6 per cent.; eosinophiles, 1.6 per cent. Iodin reaction negative.

CASE 24.—M. G., aged 21 years, white. History: Cavity diagnosed in posterior portion of left lung. Expectorates large quantities of foul-smelling material when he lies on his right side. Sputum contains cocci and bacilli, but no tubercle bacilli. An operation was done and a large pulmonary cavity was drained. At autopsy, the lower lobe of the left lung was found to contain a large number of cavities which contained a reddish material and which were due to the dilation of the bronchi. A similar condition was found in the posterior portion of the right lung. June 3, 1902, 11:30 a. m.: Erythrocytes, 4,750,000; leucocytes, 15,400; ratio, 1-308; hemoglobin, 70 per cent. Differential count, polymorphonuclears, 81.2 per cent.; lymphocytes, 16.6 per cent.; transitionals, 0.4 per cent.; eosinophiles, 1.8 per cent. Iodin reaction negative. Patient died.

CASE 25.—A. A., aged 32 years, black. History: Illness of one year's duration. Complains of cough, expectoration, loss of weight, chest pain and night sweats. Dullness all over left chest with pleural frictions both in front and behind. Beginning cavity formation above left clavicle. Sputum contains tubercle bacilli. December 2, 1902, 3:30 p. m. Erythrocytes, 4,410,000; leucocytes, 15,200; ratio, 1-290; hemoglobin, 75 per cent. Differential count, polymorphonuclears, 81.6 per cent.; lymphocytes, 15.4 per cent.; transitionals, 2.8 per cent.; eosinophiles, 0.2 per cent. Iodin reaction negative. Jan. 3, 1903: Erythrocytes, 5,710,000; leucocytes, 10,600; ratio, 1-538; hemoglobin, 95 per cent. Differential count, polymorphonuclears, 58.6 per cent.; lymphocytes, 31.8 per cent.; transitionals, 7.2 per cent.; eosinophiles, 1.6 per cent.; myelocytes, 0.8 per cent. Iodin reaction negative. Cavity formation, on above date, had extended to third rib. Patient subsequently discharged from the hospital.

CASE 26.—C. D., aged 38 years, white. History: Patient has been sick for 2 weeks with nausea, loss of appetite, pain in the abdomen, constipation, cough, expectoration and slight fever. Small area of consolidation at posterior portion of right apex, between the root of the neck and the spine of the scapula. Sputum contained tubercle bacilli. December 2, 1902, 3:30 p. m. Erythrocytes, 3,980,000; leucocytes, 10,000; ratio, 1-398; hemoglobin, 70 per cent. Differential count, polymorphonuclears, 67.6 per cent.; lymphocytes, 29.0 per cent.; transitionals, 1.8 per cent.; eosinophiles, 1.6 per cent. Iodin reaction negative. Jan. 3, 1902: Erythrocytes, 4,580,000; leucocytes, 16,600; ratio, 1-276; hemoglobin, 82 per cent. Differential count, polymorphonuclears, 62.6 per cent.; lymphocytes, 25.4 per cent.; transitionals, 8.9 per cent.; eosinophiles, 3 per cent.; myelocytes, 1 per cent. Iodin reaction negative. Patient left the hospital very much improved.

CONCLUSIONS.

1. The blood picture in pulmonary tuberculosis is not constant, and the conditions described by Grawitz[1] are by no means absolute. As can be seen by reference to the detailed results of the different examinations, there are cases in each of the three stages of the disease that are quite out of the limits of cellular and hemoglobin content described by him.

2. Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hemoglobin and about a normal number of leucocytes. The average case in the second stage presents a varying degree of leucocytosis, due to an increase in the number of polymorphonuclear, neutrophile cells. The erythrocytes are present in about normal numbers, and the hemoglobin is often normal in percentage. The average cases in the third stage will show a reduction in the number of erythrocytes, a moderate leucocytosis composed of the polymorphonuclear, neutrophile cells and a high hemoglobin percentage.

3. Hemorrhage is usually followed by a marked reduction in hemoglobin, a slight reduction in the number of

erythrocytes. Leucocytosis is not an invariable feature of a post-hemorrhagic blood.

4. Albuminuria of itself appears to cause no constant change in the blood picture.

5. Tuberculous diarrhea is apparently attended by a reduction of the number of the erythrocytes and of the percentage of hemoglobin and by an increase of the leucocytes. The latter increase is due to the polymorphonuclear, neutrophile cells.

6. Pleurisy is usually accompanied by a polymorphonuclear, neutrophile leucocytosis.

7. There is no distinctive blood picture that will serve to differentiate between extensive cavity formation due to tuberculous degeneration and that due to other causes. Further, leucocytosis is not a constant feature of cavity formation.

8. The leucocytosis occurring in the course of pulmonary tuberculosis is due to an increase of the polymorphonuclear elements and not to an increase of the lymphocytes or of the transitional cells.

9. The absence of the eosinophile cells from the blood may be looked on as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

THE PRESENT CONCEPTION OF THE PERIRENAL FASCIA

AND ITS RÔLE IN FIXATION OF THE KIDNEY.

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The introduction of cross sections into anatomic work has simplified to a marked degree the study of the fasciæ of the different regions of the body, and as a result we have at the present time accurate accounts of their osteal, muscular, vascular and visceral relations. Those fasciæ which are of the greatest surgical importance have received the greatest amount of attention, and the descriptions given of the cervical, axillary and pelvic fasciæ are fairly uniform. The fascia surrounding the kidney has not received the amount of attention that it deserves, and in the majority of text-books on anatomy and surgery no mention is made of it. In monographs devoted to renal anatomy and surgery, considerable space is given to the description of this fascia and the rôle that it plays in kidney fixation, but many who are interested in kidney work do not have access to these works, and of necessity remain unfamiliar with the attachments and visceral relations of the perirenal fascia.

The descriptions of this fascia that have been given vary considerably. These variations are dependent partly on actual variation of the fascia and partly on the methods employed in the investigation. With the introduction of improved technic for the preparation of cross sections, the descriptions have become much more uniform. It is hardly possible to conceive of the amount of patient study that has been devoted by a few investigators to this fascia, without giving the history of some of the earlier descriptions. The time at which a fatty capsule can be found surrounding the kidney and the part that it assumes in maintaining the kidney in its normal position, have not been definitely settled. An attempt will be made to give some of the late views concerning this subject.

THE PERIRENAL FASCIA.

Zuckerkandl first described, posterior to the fatty capsule of the kidney, a layer of fascia, which he considered to be derived from the lateral abdominal wall.[1] It is found anterior to the aponeurosis of the quadratus lumborum muscle, to which it is attached by fascial bands. If this fascia is traced toward the median line, it will be found to become continuous with the fibrous capsule of the kidney along its medial margin. Zuckerkandl did not describe any fascia passing over the anterior surface of the kidney, but states that after removal of the peritoneum an outer kidney capsule is found, which may become so condensed in emaciated subjects as to resemble a fascia.

Sappey[2] states that the kidney is surrounded by a fatty capsule and a fibrous sheath. This fibrous covering is derived from the subperitoneal fascia, which divides as it approaches the lateral margin of the kidney into an anterior and a posterior lamella. These two fascial lamellæ are attached to the fibrous capsule at the medial margin of the kidney and unite at its upper pole. The adrenal is excluded by this union from the special fascial compartment of the latter organ.

Nicolas[3] describes a fatty capsule, which surrounds the kidney on its anterior and posterior surfaces. The kidney is thus completely surrounded by fat, which is reflected at the hilus of the organ on the renal vessels.

Charpy[4] assigns to the fascia renalis an important rôle in maintaining the kidney in its normal position. He agrees with the other investigators in considering the fascia to be derived from the subperitoneal fascia, and describes the posterior and anterior layers as becoming continuous with the fibrous capsule of the kidney at its medial margin. From the point of attachment of the anterior layer of fascia to the fibrous capsule, a fascia is given off, which passes across the prevertebral vessels to become continuous with the corresponding fascia of the opposite side. According to this anatomist, intra-abdominal pressure and the peritoneum play an important secondary part in kidney fixation.

All the above descriptions differ somewhat as to the attachments of the layers of the perirenal fascia, and one makes no mention of a constant anterior layer. The latest description, as given by Gerota,[5] differs from all the preceding, and his findings can be verified on examination of cross sections passing through the region of the kidney. He agrees, however, with Sappey and Charpy as to the origin of this fascia. In the accompanying figures the origin and distribution of the fascia, as he has described it, can be easily seen.

As the subperitoneal fascia approaches the lateral margins of the kidneys, it divides into a prerenal and a retrorenal layer. The prerenal layer varies in consistency. In some cases it is quite firm and resistant, while in others it is represented by only a few strands of connective tissue. It covers directly the anterior surface of the kidney, and the fascial bands which are given off from it fuse with the kidney capsule proper. If this fascia is traced toward the median line, it will be found to pass anterior to the inferior vena cava and the abdominal aorta to become continuous with a corresponding fascia of the opposite side. This layer of fascia is so thin and varies so much in consistency that it is rather difficult to conceive that it alone could aid in the support of the kidney; but one must consider in this connection the

1. Zuckerkandl: Ueber den Fixations apparat der Nieren, Gratz, 1882.
2. Sappey: Traité d'anatomie descriptive, 1889, vol. iv, p. 476.
3. Nicolas: Organes génito-urinaires, Paris, 1888, p. 52.
4. A. Charpy: Organes génito-urinaires, 1890, Toulouse, p. 22.
5. Gerota: Beitrage zur Kenntniss des Befestigungs apparates der Niere. Archiv f. Anatomie u. Entwicklungs geschichte, 1895, pp. 265-82.

"fascia of fusion," to be described later, and the colon, which are intimately related to the anterior surface of the kidney.

The retrorenal fascia of Zuckerkandl lies posterior to the fatty capsule of the kidney and anterior to the aponeurosis of the quadratus lumborum and psoas muscles. Anteriorly it is connected to the fibrous capsule of the kidney by strong fascial bands. Its attachment to the aponeurosis of the quadratus lumborum and psoas muscles, posteriorly, is so firm that it is probably never

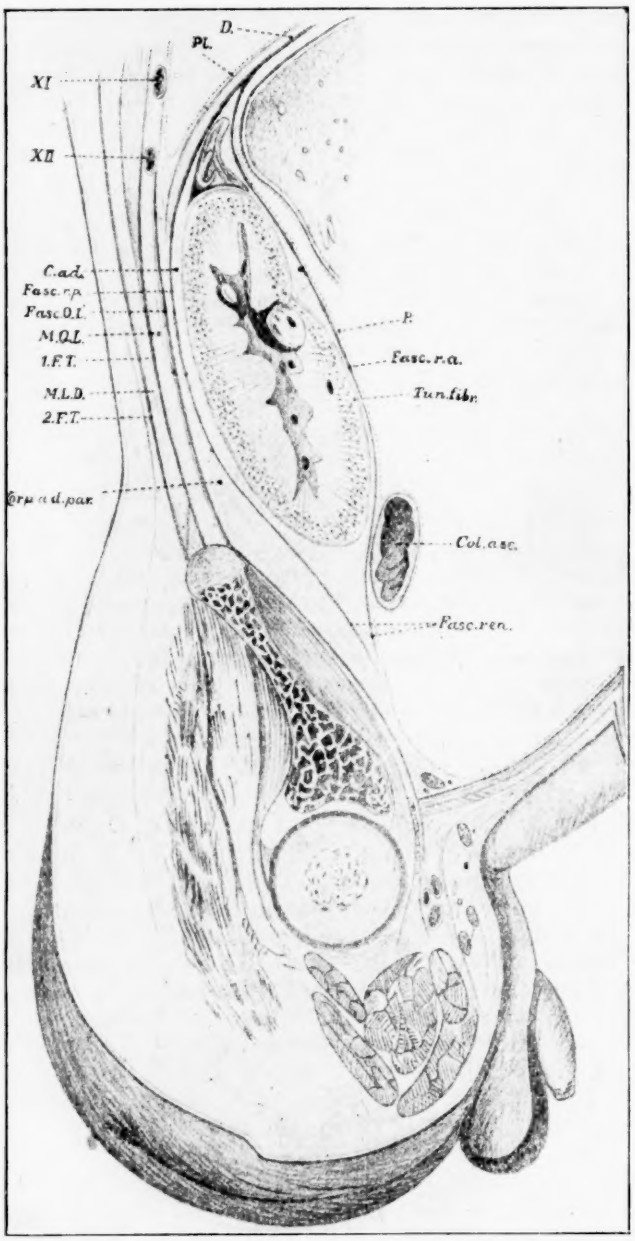

Fig. 1.—Sagittal section through the region of the right kidney of a child (after Gerota). D. Diaphragm. Pl. Parietal pleura. C. Ad. Fatty capsule of the kidney. XI. XII. Eleventh and twelfth ribs. Fasc. r. p. Retrorenal fascia. Fasc. Q. L. Proper fascia of quadratus lumborum (Gerota), or the anterior layer of lumbar fascia of the English. M. Q. L. Quadratus lumborum muscle. M. L. D. Long muscles of the back. 2 F. T. Corp. ad. par. Pararenal adipose body. P. Parietal peritoneum. Fasc. r. a. Prerenal fascia. Tun. fibr. Fibrous capsule of the kidney. Col. asc. Ascending colon. Fasc. ren. Both layers of renal fascia.

detached. At the lateral margin of the psoas muscles a process is given off from this layer of fascia which passes into the base of the transverse process of the lumbar vertebræ. Medially to the psoas the fascia is attached to the lumbar vertebræ and to the anterior common ligaments of the spine. Gerota has found in some of his specimens a well-defined ligament, which passes off from the retrorenal layer of fascia to be attached to the fourth lumbar vertebra.

If tracings of the prerenal and retrorenal layers of the fascia are made in sagittal sections, the following arrangement will be found: These two layers fuse above and are attached to the diaphragm. They do not unite, as Sappey describes, at the upper pole of the kidney, thus excluding the adrenal from the special fascial compartment of the kidney. Below, these layers of fascia do not fuse, but gradually become lost in the fat and fascia of the iliac fossa. It will be seen from the above description that the kidney and adrenal are maintained in a fascial compartment. The retrorenal layer of fascia, being connected as it is by firm fascial bands with the fibrous capsule of the kidney anteriorly and with the aponeurosis of the quadratus lumborum and psoas muscles posteriorly, is a much more important factor in maintaining the kidney in its normal position than is the prerenal. These fascial bands may become relaxed and

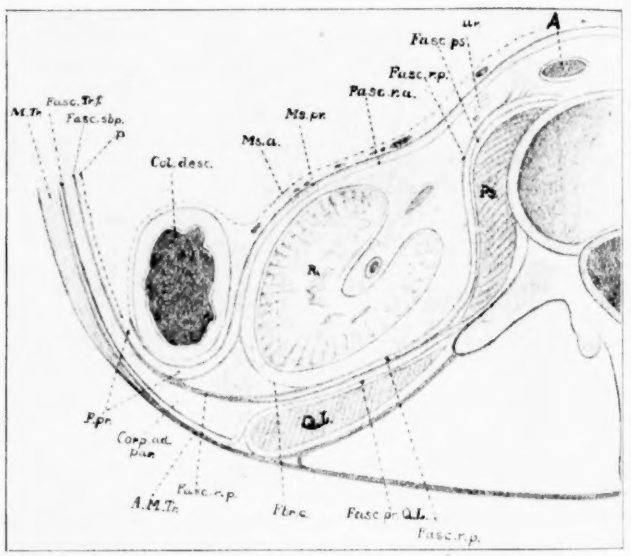

Fig. 2.—Cross section through the region of the left kidney (after Gerota). A. Abdominal Aorta. Ur. Ureter. Fasc. r. p. Retrorenal fascia of Zuckerkandl. Fasc. ps. Proper fascia of the psoas muscle. Fasc. r. a. Prerenal fascia. Ms. pr. Posterior (left) leaf of the primitive descending mesocolon. Ms. a. Anterior (right) leaf of the primitive descending mesocolon, the definitive parietal peritoneum. Col. desc. Descending colon. P. Parietal peritoneum. Fasc. tr. f. Fascia transversalis. M. tr. Transversalis muscle. P. pr. Original parietal peritoneum (dotted). Corp. ad. par. Pararenal fatty body. A. M. Tr. Aponeurosis of origin of the transversalis muscle. Fbr. c. Fascial bundles at lateral margin of the kidney, connecting the prerenal and the retrorenal fasciæ. Q. L. Quadratus lumborum muscle. Fasc. pr. Q. L. Proper fascia of the quadratus lumborum muscle, or the anterior layer of lumbar fascia of the English. R. Kidney.

atrophic, and thus permit of displacement of the kidney within its fascial sheath.

"FASCIÆ OF FUSION."

Anatomists are indebted to Toldt for their knowledge of the series of changes by which the primitive straight intestine of the embryo becomes the convoluted intestine of the adult. In the embryo the anterior surface of the kidney is covered by parietal peritoneum and the future colon occupies a median position, attached to the vertebral column by a long primitive mesocolon. The future colon undergoes a series of rotary changes, passing from right to left, so that, finally, the cecum lies in front of the lower pole of the right kidney and the descending colon covers two-thirds of the anterior surface of the left

kidney. At this stage in embryonic life there will be found anterior to the left kidney three superimposed planes of peritoneum. These layers are the primitive parietal peritoneum and the two layers of the mesocolon. The two layers of the mesocolon fuse and later fusion with the parietal peritoneum occurs. As the result of this fusion a fascia is formed to which Toldt has given the name of "fasciæ of fusion." The definitive parietal peritoneum represents, then, the original mesocolon and the primitive peritoneum remains as a "fascia of fusion."

The extent to which the kidney is covered by the fascia depends on how great an area of the kidney is covered by the colon. On the left side two-thirds of the anterior surface of the kidney will be covered by the fascia, and on the right side only the lower pole. This fascia may not be found in all cases, for in 26 per cent. of the cases on the right side and 36 per cent. of the cases on the left, the formation of this fascia does not occur, and in these cases the ascending and descending colons retain their peritoneal folds as a distinct mesocolon, attaching them to the posterior abdominal wall.

THE FATTY CAPSULE OF THE KIDNEY AND THE PARARENAL ADIPOSE BODY.

Anatomists differ as to the time that the fatty capsule of the kidney develops, to what extent it covers the kidney, and as to how much of a factor it is in fixing this organ. It seems to be the general opinion that the fatty capsule attains its greatest development along the lateral margin of the kidney and its lower pole. At the medial margin of the kidney it becomes continuous with the fat of the renal sinus and is reflected along the ureter and spermatic vessels downward into the pelvis. In the majority of cases no fat will be found on the anterior surface of the kidney.

Sappey states that the fatty capsule does not appear until the eighth or tenth year. Gerota and Tuffier have found a fatty capsule present at a much earlier date. The former has found a well-defined fatty capsule during the first and second years of life, and the latter states that it is present in the new-born.

Tuffier[6] does not assign to the fatty capsule any part in the fixation of the kidney. In some exhaustive animal studies he has found that the kidney undergoes movements isochronic with the pulse beat (movement of expansion) and movements isochronic with the respiration (movement of translation). He believes that the fatty capsule aids these movements and considers it as quite comparable to the fat surrounding the bulb of the eye, the rectum and the bladder. Gerota states that a moderate deposit of fat may have some influence in rendering the fascial septa passing from the retrorenal fascia to the fibrous tunic of the kidney stronger and keeping them tense. Gerota suggests that the fatty mass occupying the triangular space between the quadratus lumborum, the psoas and the iliac crest be known as the "corpus adiposum pararenale." It is derived from the subperitoneal fat. Its position and extent are well shown in the accompanying figures. It lies between the retrorenal and transversalis fasciæ. In perinephritic processes ending in pus formation, these fatty bodies may exercise some influence on the gravitation of the pus. In case the fatty capsule of the kidney is affected, the pus will gravitate along the ureter and spermatic vessels into the pelvis. Pus arising from inflammation of the pararenal adipose body will discharge at Petit's triangle or burrow downward into the iliac fossa.

As recently suggested by Professor Keen, the pararenal adipose body and the retrorenal fasciæ are important guides in kidney surgery. After incision of the quadratus lumborum and the anterior layer of the lumbar fascia, the pararenal adipose body will be exposed. Just anterior to this will be found the dense, shining retrorenal fascia, which lies just posterior to the fatty capsule of the kidney.

Gerota has demonstrated in his work that the adrenal assists in maintaining the kidney in position. This is especially so in children. In experimenting on the cadaver of a child he found that a traction amounting to between 750 and 1,000 grams must be exerted before the adrenal and the kidney separate. In the adult the kidney becomes so much larger than the adrenal that the latter probably has no influence whatever.

The perirenal fascia may be regarded as the most important factor in maintaining the kidney in its normal position, but we should never lose sight of the fact, however, that the neighboring organs, peritoneum, fatty capsule and intra-abdominal pressure are important accessories.

Harris[7] and Andrews[8] were among the first to realize the full surgical significance of this fascia and its importance in kidney fixation. The former attempts, after the removal of the perirenal fat, to diminish, by suturing, the size of the fascial compartment in which the kidney lies. If the pouch is very large and the peritoneum bulges to the medial side of the colon, a small opening is made into the peritoneal cavity to the outer side of the colon and sutures are passed through the mesocolon from within. This layer is then approximated to the posterior abdominal wall, diminishing the size of the compartment. Care should be exercised to avoid injury of the arteria colica dextra or sinistra, as the case may be. As a final step in the obliteration of the compartment, the prerenal fascia is sutured to the lumbar fascia posterior to the line of incision through the abdominal wall. Andrews, in his "reefing" operation, splits the fatty capsule of the kidney longitudinally. The retrorenal fascia is supposed to be included within the fat. These two flaps are pulled out through the line of incision and retained in this position, while mattress sutures are passed through the muscles and tied. The fatty flaps thus lie outside of the incision and are retained in position by the pressure of the coapted cut surfaces. Andrews devised this operation because he found that the fascia and fat were too friable to retain sutures. Harris and Andrews have reported a series of cases, and the results obtained from their operations are good.

The good results obtained from the Senn method of gauze packing are dependent on the broad bands of adhesions forming between the lower pole of the kidney and the retrorenal fascia. If, after removal of the fatty capsule of the kidney, the retrorenal fascia were exposed and sutured directly into the fibrous capsule of the kidney, good and lasting results should be obtained. This direct suture could be most easily combined with the Senn method. Direct suture would certainly be more advantageous than any of those methods by which the kidney capsule is retained against the retrorenal fascia by sutures passed through the kidney parenchyma.

We can not depend on sutures to hold these two in apposition long enough to insure a reaction leading to the formation of adhesions.

6. Tuffier: La capsule adipeuse du rein au point de vue chirurgical. Revue de Chirurgie, 1890, p. 390.

7. M. L. Harris: Movable Kidney—Its Cause and Treatment. THE JOURNAL A. M. A., June 1, 1901.

8. E. W. Andrews: The Reefing Operation for Movable Kidney. THE JOURNAL A. M. A., Oct. 6, 1900, pp. 877-80.

THE VALUE OF AN INJURY.*

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NEW ORLEANS.

We all understand that compensation is both an underlying law of nature and also the law of the country in fixing the amount of damages, and it may be said that in fixing the value, cost or price, as you may choose to term it, of any injury, the law of compensation is the guiding star by which the measure of damages in the instant case is to be determined. The difficulty in the situation is to apply the rule of compensation to each individual case as it arises. We are told by the law books that "compensation is the basic principle of the law of damages, the measure thereof being limited and controlled, and the elements of recovery primarily determined by this fundamental consideration." We are also told by the books that "there are frequently elements involved so wholly insusceptible of money valuation that the measure of recovery must be left largely, if not entirely, to the discretion of the jury. This is noticeably the case in actions for damages for personal injuries where physical suffering has resulted, and likewise where mental distress has been a consequence of the defendant's act."

When we remember how difficult it is to fix any sort of estimate on physical suffering, and how much more difficult it is to measure mental distress by the standard of a dollar, we realize the difficulty of discussing the subject in hand.

As I have already indicated, the jury generally fixes the price in such cases, and unless the verdict is so excessive or so grossly inadequate as to indicate passion, prejudice or corruption, it will generally be allowed to stand, though the courts presiding in such cases have always asserted and exercised the right of setting aside such verdicts as, in their judgment, are so wholly disproportionate to the injury suffered as to indicate passion, prejudice or corruption on the part of the jury.

While this is true, we are told, to use the language of legal books, that "In no other class of cases does the amount of damages rest necessarily so largely in the discretion of the jury as in those involving a recovery for the infliction of personal injuries, and the courts are very loath to interfere with a verdict in such cases in the absence of plain evidence that the jury have abused the discretion vested in them."

It must be patent in the outset to every thinking mind that the value or cost of all injuries must, in the nature of the case, be extremely relative. The loss of one's eyes would not mean the same in dollars and cents, at least, to the day laborer and to the accomplished surgeon. The loss of life itself would not mean the same in dollars and cents to the family of a young, vigorous man who gave promise of many years to live, and of a man earning the same salary whose age and infirmity was such as to render it certain that his labors were almost at an end.

At the risk of appearing a little tedious, I shall now call the attention of my auditors to a few cases which have "passed muster" in the courts of the country, in which verdicts for various elements of injury have been rendered, and the judgments entered thereon have been approved by the courts of last resort.

In the case of Morgan vs. Southern Pacific R. R. Company, decided by the Supreme Court of California, the plaintiff was a woman and the injury was permanent, amounting practically to total disability, and the verdict, which was for $15,000, was sustained.

In the case of Chicago vs. Leseth, decided by the Illinois Supreme Court, the plaintiff suffered from a displaced womb, resulting in permanent injury to health. The verdict was for $15,000 and was sustained by the court.

In the case of Bennet vs. New York Central R. R. Co., an $8,000 verdict, in a case of curvature of the spine, was sustained by the Supreme Court of New York.

In the case of International R. R. Co. vs. Mulliken, decided by the Supreme Court of Texas, $4,000 was held to be a reasonable verdict for "incurable spinal disease."

In the case of Osborne vs. Detroit, reported in "32d Federal Reporter," $10,000 was held to be a reasonable verdict for an injury resulting in paralysis of one-half of the body; and in the case of Bishop vs. St. Paul City R. R. Company, the Supreme Court of Minnesota held that $15,000 was a reasonable verdict for the same injury.

The Supreme Court of Wisconsin held, in the case of McMahon vs. Eau Claire Water Works Co., that $5,000 was not an unreasonable verdict in case of an injury causing "paresis or progressive paralysis."

A very interesting case will be found in "86th Georgia Reports," which is styled Georgia Pacific R. R. Co., vs. Dooley, in which a $16,000 verdict was upheld for an injury resulting in the "displacement and enlargement of the heart."

The case of Dieffenbach vs. New York Central R. R. Co., presents a case of a very severe injury, not necessarily permanent, and the plaintiff, who was a young man earning more than $4,000 a year, recovered a verdict of $25,000, which was allowed to stand.

There is a case recorded in the "78th Federal Reporter," where a $5,000 verdict was allowed to stand for an injury resulting in the "impairment of muscular sense, feeling and partial loss of hearing."

The total loss of vision was the result of an injury, for which suit was brought in the case of Stearns vs. Reidy, reported in "105th Illinois Reports," and a verdict of $9,000 was held to be reasonable.

A $14,000 verdict was sustained in the case of Wallace vs. Vacuum Oil Company, decided by the Supreme Court of New York, in which the injury is described as "the loss of eye and other serious injuries."

A verdict of $100 was sustained by the Supreme Court of New York for an injury described as "a black eye."

The loss of a leg was held to justify a verdict of $2,300 in the William Branfoot case, reported in "52d Federal Reports," and the loss of both legs was held to justify a $15,000 verdict by the courts of Arizona, a $13,000 verdict by the courts of Colorado, and a $25,000 verdict by the courts of Illinois. The difference in amounts in these cases doubtless depended on the different state of facts presented in each case. The loss of both legs to a common laborer, earning a dollar a day, would be a very different thing, when measured by dollars and cents, to the loss of a leg by a civil engineer whose salary was $10,000 per annum. The loss of a foot was held to justify a verdict of $9,000 by the Supreme Court of Georgia in the case of Georgia Railroad, etc., Co. vs. Keating; and a verdict of $11,000 by the Supreme Court of New York in the case of Jordan vs. New York Central R. R. Co., and in the case of Commerford vs. Atlantic Avenue R. R. Co., the Supreme

* President's address before the American Academy of Railway Surgeons, Chicago, Oct. 1-2, 1903.

Court of New York sustained a verdict of $8,500 for the loss of several toes.

In the case of Chipman vs. Union Pacific Railroad Company, reported in "12th Utah Reports," the plaintiff was a child who had lost her foot and the recovery was $10,500, and the verdict was sustained.

In the case of the loss of an arm a $5,000 verdict was sustained in one case by the courts of Arkansas, an $8,000 verdict by the Supreme Court of Illinois, a $4,000 verdict by the Supreme Court of Iowa, and a $9,119 verdict was sustained by the Supreme Court of Texas in the case of Missouri, etc., R. R. Co. vs. Kirkland, while the Supreme Court of Wisconsin sustained a $10,000 verdict for the same injury.

The loss of a hand has been variously estimated by approved verdicts ranging from $1,250 to $5,000 in cases reported by various courts. The loss of fingers has been the prolific mother of many damage suits, and the verdicts have ranged all the way from a few hundred dollars to $8,500, which was the amount of the verdict in the case of Ridenhour vs. Kansas City Cable R. R. Co., in which case all the fingers on one hand were disabled.

For injuries resulting in death the verdicts which have been rendered and sustained by the courts of the country, in the nature of things, show the greatest possible variation, and it would serve no useful purpose to undertake to classify them. It would seem but natural that verdicts in such cases should run higher than in cases resulting in the loss of a limb, but it is a curious fact that such is not ordinarily the case, and the well-informed personal injury agent and railroad attorney would ordinarily prefer to defend a case of an injury resulting in death rather than one resulting in permanent disability. The reason is not very obvious, though it is sometimes accounted for by the fact that a jury has more sympathy for a permanent cripple than for the heirs or representatives of a dead man, whose injuries are covered by the grave. Like all other rules, this one has its exceptions, and a pretty widow and orphan children, as plaintiffs, have frequently caused verdicts to rise very high in the scale when compared with the earnings of the deceased.

It will be remembered that it is the province of the courts not only to set aside verdicts which are considered excessive and oppressive, but it is also their province to set aside such verdicts as, in their judgment, may be inadequate, and it will be of interest to the profession to know that, so far as my investigation has gone in the leading legal authorities on this subject the highest verdict which is reported to have been set aside was that in favor of a physician. I refer to the case of Phillips vs. London, etc., R. R. Company, reported in "29th Moak," on page 177, where a verdict of £7,000 for "injuries sustained by plaintiff through the negligence of the defendant," was set aside as inadequate on the ground that "the jury must have omitted to take into consideration some of the elements of damage." "The plaintiff, who was a physician in the prime of life, having a practice worth, perhaps, £7,000 per annum, was reduced by the injury to a condition of helplessness, with every enjoyment of life destroyed, and with the prospect of a speedy death."

While at first thought, it would seem that a verdict of $35,000 appears pretty large, and while any railroad company which was called on to pay that much for any of us would consider itself pretty unfortunate, still, when it is remembered that this amount only represented about one year's earnings of the plaintiff in the case, that his life was rendered a burden and greatly shortened by the accident. it is manifest that the verdict should have been set aside as utterly inadequate.

While some of our clients may not be able to appreciate the justice of some of the verdicts hereinbefore mentioned, and while some were doubtless influenced, to some extent at least by passion and prejudice, yet, after all, it is the duty of every good citizen to bow to the majesty of the law, ever remembering as has been said:

Of the law there can be no less acknowledged than that her seat is in the bosom of God; her voice in the harmony of the world. All things in heaven and earth do her homage, the very least as feeling her care, the greatest as not exempted from her power, both angels and men and the creatures of what condition soever, though each a different sort and manner, yet all are with uniform concert, admiring her as the mother of their peace and joy.

The railroad surgeon can not prevent injuries, but he can very materially lessen the loss or damage thereto by careful and skillful attention to each case submitted to his individual care. In proportion as he lessens the cost of such injuries, will his services be valuable to the companies whose interests are committed to his care.

Clinical Reports.

MYCOSIS FUNGOIDES.

CASE REPORT WITH AUTOPSY AND HISTOLOGIC REPORT.

JOHN C. HANCOCK, M.D.
DUBUQUE, IOWA.

The report of this case is offered in view of the comparatively rare occurrence of the disease, and the question as to whether the process is that of infection or neoplasm, the unfavorableness of the prognosis, and the futility of treatment.

History.—B. D. S., 39 years old, male, married, clergyman, was born in Missouri, but now resides in Iowa. He denies alcohol, tobacco and venereal history. I saw him June 29, 1899.

Family History.—Father died at 71 years and had "gravel"; mother living at 73 years and well; five brothers living and well, one brother died of typhoid; two sisters living; one sister died of "croup"; otherwise negative. Wife and five children are living and well.

Previous History.—Whooping cough at 4, chicken-pox at 5, scarlet fever at 6, measles at 10, pneumonia at 14, mumps and influenza at 30. During the 17 years preceding the present illness, patient had several varieties of skin lesions more or less obscure as to character. At 22 years he had an eruption on right side of trunk, left shoulder, thigh and groin. The spots were yellow to red, not elevated, irregular in shape and confluent, accompanied by burning and itching but without scaling. Arsenic internally and iodin locally caused this eruption to disappear. At the same time, and at intervals for thirteen years after, had cankers in mouth.

Present Illness.—This began six years ago with itching and burning on soles, palms, backs of knees and other joints, and was not accompanied by any visible eruption. The itching gradually increased, and the palms and backs of hands began to crack without any other signs of disturbance. About three years ago, with further increase of itching, flat areas bluish-pink or light purple, the size of finger nails, appeared. These areas were the seat of burning and itching, especially in presence of moisture. Slight thickening and fissuring of the discolored areas began, and line of demarcation from normal skin became distinct. The lesions on exposed parts were the most marked, and desquamation occurred. Nine to ten months ago in the center of these areas, pea-sized, round discrete elevated nodules appeared. These gradually increased in size, uniformly in most instances, but also irregularly, and became the centers of the most intense itching and burning. Some,

after increasing in size, broke down, forming ulcers, while others, regardless of size or shape, became absorbed without breaking down. Still others showed absorption in segments of any shape or size, often leaving a furrow between the original segments. Sometimes one-half of a tumor absorbed while the other broke down or became absorbed later on. Absorption also started in the center and proceeded concentrically in some cases. Ulceration took place in the same irregular ways. After ulceration and healing the area became covered with skin, which, however, remained discolored. With the advent of the tumor masses and ulcers nine months ago patient began to have fever. The ulcers gave off a foul pus. Feb. 9, 1899, the patient consulted Dr. J. Nevins Hyde of Chicago, who made the diagnosis of mycosis fungoides.

Examination.—June 29, 1899, patient presented himself with the diagnosis of mycosis fungoides to Dr. G. A. Staples, who referred him to me for treatment. He was a man over six feet high, weighing 165 pounds, well built and still fairly well nourished. Examination showed extensive and marked skin lesions. These, as partially indicated by photographs, were at the outer canthus of the right eye, right angle of the mouth, both sides of neck beneath the lower jaw, back of neck, both shoulders and axillæ, extending from the left downward and inward over pectoral region toward nipple, both elbows, wrists and hands, palms and dorsum, both hips, external genitals, both thighs, but more particularly the left, both knees, and the left calf. The feet at this time were only slightly

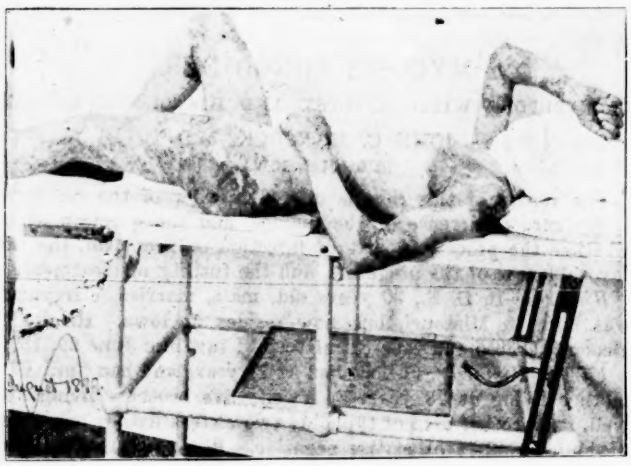

Fig. 1.—Case of mycosis fungoides, August, 1899.

involved. These areas consisted of a plateau of indurated purplish-pink slightly scaling skin, sharply defined with reference to normal skin having without any system or regularity, either as to distribution or size, nodules varying in size from that of a large shot to that of half a pear. The elevated areas were not tender, but itched and burned. Fissures, especially on the exposed parts, were conspicuous and in the natural folds the skin was noticeably tough and thick. These areas changed slowly and seemed on the whole to advance. The tumors seemed to take origin in the skin, and were freely movable with it. For the most part, the base was broad, but in some cases the tumors were attached by pedicles. The tumors were solid, hard masses without fluctuation. In the course of their careers they grew slowly to the size of a hazel nut or larger, remained indefinitely, broke down in ulcers, or became absorbed. There seemed to be no rule or system governing their course. In breaking down to form ulcers or in absorbing, there was no uniformity in the same or adjacent tumors. Some absorbed across the center, leaving irregular masses to remain or be absorbed later or to ulcerate. The largest tumor to the right of and posterior to the scrotum was the size of a split pear. Ulcers formed in the same irregular way. On the outer and anterior aspect of the left thigh will be seen in the photos the largest ulcer. This measured 1½ by 2 inches. The ulcers presented elevated irregular thickened margins with uneven indurated centers covered for the most part with tough sloughs and pus. The ulcers were not tender to the touch. The pus was foul smelling and resembled ordinary pus in appearance. Beside this eruption there appeared from time to time, chiefly on the abdomen, the chest and the back, parts not much involved by the eruption described above, flat, discrete and confluent pink to purple lesions. These caused increased suffering from itching and burning. This eruption disappeared and recurred, but was present more than half of the time the patient was under observation. The superficial lymph glands were uniformly and slightly enlarged and not tender. Slight edema of the feet and ankles was present. Reflexes were normal. Heart and lungs and abdominal organs were negative. The urine in August, 1899, was 64 ounces in 24 hours, slightly acid; sp. gr. 1,012; slight possible trace of albumin; no bile or sugar; urea, 20.544 grams in 24 hours. In September,

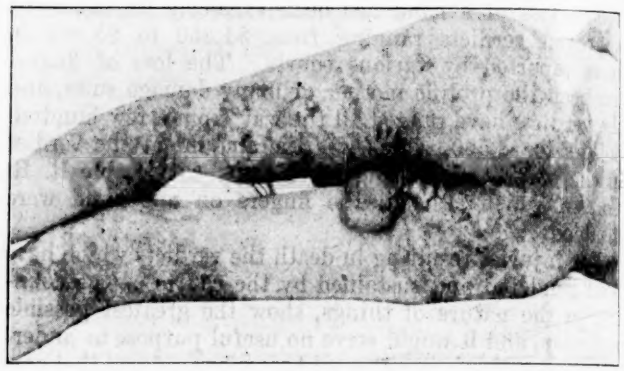

Fig. 2.—Mycosis fungoides, August, 1899.

amount 31 ounces, pale, slightly acid; sp. gr. 1,011; one-eighth per cent. albumin, and urea 11.9 grams in 24 hours; sugar and bile absent.

When the patient left for home, his weight had dropped to 152½ pounds. His subsequent history and the pictures were furnished by Dr. J. W. Kirkpatrick, Wyoming, Iowa, under whose care he remained until his death, in August, 1900. Dr. Kirkpatrick's report is as follows:

Course.—"Rev. B. D. S. came under my care in October, 1899. At that time he was able to be up and around the house all day, and did not suffer much pain aside from the itching

Fig. 3.—View of leg later. Figures 3, 4 and 5 are from photographs taken by Dr. J. W. Kirkpatrick, Wyoming, Iowa, some months later than Figures 1 and 2.

and burning. The disease was present on the feet, legs, buttocks, hands, arms and one shoulder. The face and scalp did not become involved, excepting one ulcer at the corner of the mouth. The abdomen and chest were quite free from the disease. During the winter he began to have attacks of fever, which I believed to be septic, although every effort was made to keep the diseased parts scrupulously clean. At these times the temperature frequently went to 104 or 105 degrees, persisted three or four days, and then gradually subsided.

Treatment.—"I used the Finsen light treatment on him for about six weeks, beginning in June. On the parts where the ulceration was not so deep, there was a very perceptible improvement. Many of the smaller ulcers on the feet healed entirely, but on the larger places it did not have the same effect, but rather made the parts more tender. I discontinued

the treatment because it was evident that at best it could not have more than a palliative effect and the disease had already invaded the vital organs, and had sapped his vitality till it was very evident that the final issue could not be long delayed. I believe that this treatment in the earlier stages of this disease might be of utility."

The treatment of this disease as recommended by the authorities is both general and local, and from its variety seems to rest on no rational basis, and this goes to show that the relation of etiology, pathology and treatment leaves much to be determined. Practically all the remedies mentioned in works on diseases of the skin were tried at various times without any real or lasting effect being produced. The routine measures used to relieve the itching and burning and to secure cleanliness were warm baths of various kinds followed by the application of various ointments, powders and lotions, and the parts bandaged and dressed. These measures were but indifferently successful and sedatives were frequently necessary to secure rest and sleep. Arsenic internally was pushed to the limit of tolerance, with but slight and transitory effect. Subcutaneous injections of arsenic into the tumors caused sloughing of same, but other tumors appeared faster than those treated disappeared. Liq. iodi comp, as an injection was also tried. Beta-naphthol and camphor combined were used internally and externally without effect. Thyroid extract internally produced no effect. Radiotherapy, as recommended by Hyde, was not tried, unfortunately, the patient having gone home. Finsen light, as mentioned by Dr. Kirkpatrick, produced no appreciable benefit.

Fig. 4.—View of arm.

Autopsy.—In August, 1900, the patient died, and by previous arrangement I was notified, and 18 hours after death performed the autopsy. The body had already been injected with formaldehyd. The conspicuous features were: (1) extreme emaciation, (2) skin eruption, (3) negative findings of the viscera. Emaciation had progressed to such an extent that no fat was to be made out macroscopically under the skin, in the mesentery, omentum, retroperitoneal or perirenal regions, or about the heart or other organs. On the surface of the body, more particularly on the buttocks, perineum, thighs, knees, ankles, feet, arms, hands, face, and back of neck were tumors varying in size from that of a pea to that of a small orange. Some, having broken down, had become large ulcers, presenting elevated, irregular, firm margins with uneven pitted centers, covered with sloughs and pus. Postmortem changes had reduced the tumors in size and consistency. The bases and the pedicles had their attachment in the skin entirely. Some tumors were easily detached, while others were firmly bound down to surrounding skin. About the tumors were areas of infiltration, brown in color, with free desquamation. On opening the abdominal cavity the viscera, except for absence of all fat, were normal. In the right pleural cavity the lung was extensively adherent to its parietes. Both lungs showed some hypostatic congestion posteriorly, otherwise the heart and the lungs were normal. The superficial lymph glands were enlarged, but the deep ones were not enlarged.

Histology.—The histologic report of the specimens is kindly furnished by Dr. J. H. Wright, director of the Clinico-Pathological Laboratory of the Massachusetts General Hospital, Boston. Since the case reported, Wright has examined two others and has found essentially the same pathologic conditions present.

"The material had been preserved in Zenker's fluid and in alcohol. It consisted of portions of skin, some of which presented tumor formations, and portions of lung, liver and spleen.

"Microscopic examination of sections of the material from the skin shows that the tumor formations are composed essentially of a very cellular tissue. In the sections the tissue has the appearance of being made up essentially of closely packed small cells among which a relatively small amount of connective tissue stroma as well as a fair number of capillary blood vessels are distributed. Over wide areas the stroma was only made easily visible in the form of a reticulum of fibrils by the use of Mallory's connective-tissue stain.

"The cells which make up the greater part of the tumors vary greatly in size and appearance. The prevailing cell has little or no cytoplasm, and usually has a very irregularly shaped, shrunken or wrinkled-appearing nucleus in which there

Fig. 5.—View of nates.

are few or no nuclear granules. The size of these cells varies, some of them being smaller than lymphoid cells, but probably most of them slightly larger than lymphoid cells. Their nuclei are very different in appearance from the deeply staining, round or oval, granular nuclei of lymphoid cells. Another kind of cell has a large, pale-staining irregular nucleus and an indefinite amount of cytoplasm. Besides these cells there are other structures staining more or less deeply with nuclear stains and apparently representing degenerated nuclei. In places polynuclear eosinophilic leucocytes are scattered among the cells of the tumor. The epidermis over the tumors is more or less atrophic and distorted.

"In sections of the skin, in which no gross tumor formation was apparent, infiltrations and aggregations of the same cells as those described above in the tumors are present in the corium and around sweat glands.

"The study of the sections from the skin and from the tumors strongly suggests that the tumors have arisen as infiltrations in these situations.

"No bacteria or other parasites were observed in the sections.

"In general the histologic structure of the tumor tissue is very similar to that of the sarcoma originating in lymphadenoid tissue, that is lymphosarcoma. It also has some similarity to that of syphilitic lesions.

"In my opinion the neoplasm in this case should be classed as a sarcoma. If one accepts the widely spread belief that lymphosarcoma and similar neoplasms are caused by parasites, he will regard the new growth in the present case as also caused by a parasite. I do not hold this view, however.

"Microscopic examination of sections of the liver, lung, spleen and kidney shows nothing worthy of mention."

URETERAL INJECTION OF OIL FOLLOWED BY THE SPONTANEOUS PASSING OF A URETERAL STONE.

LOUIS E. SCHMIDT, M.D.
CHICAGO.

Mrs. P., age 35 years, married 10 years. Family and previout history gives no information. Present sickness commenced in June, 1897, with a sudden colicky pain in the right iliac region and lancinating pains down the inner surface of the right thigh. This attack lasted 20 hours, and during this period Dr. Etheridge found a copious quantity of blood in the urine, and was obliged to give morphin hypodermatically to alleviate the pain. Since then the patient has had repeated typical attacks of renal colic; however, the pain was more or less localized in the right iliac region, and the attacks were never as severe as the first. A skiagraph taken in December, 1902, showed the outlines of a ureteral stone. The dull ache and tenderness always corresponded to this point.

Drs. Harvey and Paddock referred the case to me Jan. 5, 1904. I catheterized the right ureter and several centimeters

from the ureteral orifice a slight obstruction was felt, but the catheter glided over it readily. To collect a sufficient quantity of urine to establish the sufficiency of the kidney in case of needed surgical interference, the catheter was left in place for two hours. At the end of this time 12 c.c. of sterilized albolene were injected into the pelvis of the right kidney, 8 c.c. were injected along the ureter as the ureteral catheter was gradually withdrawn. There immediately followed a dull ache in the right lumbar region and down the right iliac region. Although this was not as severe as any of her attacks, yet it was of such character as to necessitate her resting for some minutes before leaving the office.

The pains and the dull ache of which she had complained since the beginning of her present sickness became more severe than they had been for the past years. Finally, during the morning of January 12, the pains in the right iliac region became very severe. She became uneasy, and in order to distract her attention she sat down to the sewing machine. In a few minutes the patient, as she described it, "felt something give way." She was then obliged to urinate, and passed the stone which is here shown. Since then a skiagraph has been taken and the plate shows the absence of the stone, in contradistinction to the skiagraph taken in December, 1902. Since the passing of the stone the patient feels considerably better, especially mentally, as she knows the stone no longer exists in her ureter.

1003 Schiller Building.

A CASE OF EXFOLIATION OF THE ANTERIOR ARCH OF THE ATLAS.

RICHARD H. BROWN, M.D.
Associate Clinical Professor of Diseases of the Ear, Nose and Throat, Medical Department University of Illinois.
CHICAGO.

J. P., aged 30, a Bohemian, was employed in a carriage factory. He was extremely pale and emaciated, and the principal symptom that at once attracted attention was the fact that he carried his head and shoulders as rigidly immovable as though clamped in a vise. In expectorating, he would bend from the waist, shielding his neck in every movement. He complained of very severe pain in his throat and in the muscles of his neck.

Examination.—An angry ulcer was found, oval in outline, and about a centimeter in its longest diameter, on the posterior wall of the pharynx, a little above the level of the soft palate. There was a profuse purulent discharge and great inflammation of the parts around. Further examination showed marked enlargement of the glands over the entire body, with a mottled

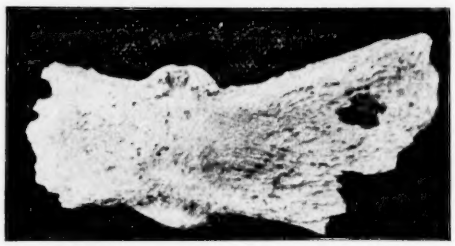

Fig. 1.—The exfoliated portion of the atlas, anterior view.

eruption, mucous patches in the mouth, and a low-grade fever. There was no difficulty in diagnosing the case as syphilitic.

History.—The history in brief was as follows: The first sore came in October, 1896. The sore throat showed in December, and the eruption on the body and the ulcer in the pharynx came the next month. Some time during February, or only four months after the initial lesion, he began to have pain in the muscles of the neck and increasing stiffness. Immediately on the appearance of the chancre he began treatment, but it had little or no effect. He was in a pitiable condition when I first saw him, July 17, 1897. For six weeks he slept in a chair, as the pain on turning, or rising to expectorate, was intense. It was necessary to give him morphin frequently to

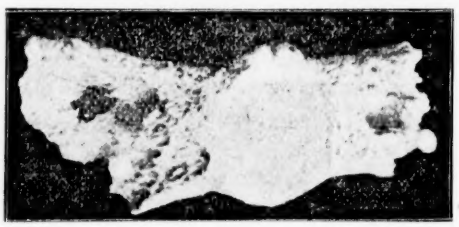

Fig. 2.—Same, posterior view.

ease his suffering. He came to the office daily for treatment of the ulcer. Improvement began to be noticeable in about ten days, and continued, gradually but slowly, until full recovery.

Treatment.—He was put on daily inunctions of mercurial ointment and increasing doses of protoiodid, beginning with ¼ grain, after each meal, and reaching finally as high as 2½ grains at a dose. With this was given a bitter tonic, with essence of pepsin. The food consisted principally of milk, eggnog and soft-boiled eggs. Locally, the ulcer was washed out daily with an alkaline spray and peroxid, and filled with a mixture of papain and iodoform.

The extreme pain lessened and then disappeared, but the limitation of motion continued. Except for a rocking motion of the head on the condyles, all turning seemed to be from the waist. The ulcer did not entirely heal, and it was apparent that there was dead bone at the bottom. This was allowed to separate of itself, which it did early in October, and very much

to my surprise, I found that nearly the entire anterior arch of the atlas had come away.

A few days later the patient told me that he hawked up a small piece of bone, shaped like a finger nail, smooth on the one side and rough on the other. This was doubtless the articular facet from the anterior face of the pin of the axis. This scale of bone was, unfortunately, not preserved.

The illustrations show the front and back views of the piece of the atlas exfoliated and are about one-half larger than the original.

Course.—After the sloughing off of the piece of bone, the ulcer quickly healed, and the patient, in a few weeks, was able to do light work. For some months afterward, a sharp pain warned him not to move the head too far backward, and the motion of rotation was limited about one-half.

A marked depression existed in the throat at the site of the injury, and the finger there could not detect any motion whatever between the atlas and axis.

The extent of rotation has increased somewhat during the past years, probably from increased mobility of the cervical spine, and, except for the slight stiffness of the neck, the patient shows no symptoms of his former trouble.

Other Cases.—I find recorded in the literature some eighty cases of caries and necrosis of the atlas or axis, the vast proportion being evidently tubercular. With but few exceptions, they ended fatally, and nearly all of those who survived were paralyzed in greater or less degree. I was able to find only five cases[1] of syphilitic exfoliation of parts of these bones, one reported from Germany, three from Great Britain, and one from this country. All recovered. Doubtless a good many other cases of this kind have occurred, which have not been reported, for this is a common place for a pharyngeal ulcer, and deep ulcers from syphilis are extremely frequent.

In the other five cases found, as well as in my own, there were no signs of inflammatory trouble of the medulla, despite the nearness of the disease to this vital point.

70 State Street.

1. Deutsche Zeitschrift für Chir., July, 1885; Lond. Med. Gazette, April 4, 1835; Philadelphia Med. Times, Oct. 19, 1872; Dublin Jour. Med. Sci., February, 1877; Medico-Chir. Trans., London, Feb. 13, 1849.

ABDOMINAL PAIN AND PNEUMONIA.

G. H. SCOTT, M.D.
Assistant Surgeon, U. S. A.
BULAN, SORSOGON PROVINCE, P. I.

In connection with the instructive paper by Dr. Herrick in THE JOURNAL of the American Medical Association on "Abdominal Pain in Pleurisy and Pneumonia," I report the following case:

The patient, a native female, single, aged 20, of previous good health, suddenly was seized about 10 a. m. with a violent chill, followed by very severe pain in the umbilical region. This lasted for about an hour. About 5 p. m. the pain returned, and she had a sensation of "burning up," as she expressed it. I saw the patient for the first time about 9 p. m. The abdominal pain seemed to radiate downward and laterally from the umbilicus, but did not extend above that point. It was of a dull, aching character, although the first paroxysm had been of a sharp, stabbing nature. No evidence of tenderness was found, and there was no rigidity or tympany. Bowel movements had been natural. The temperature was 100, pulse 80, full and strong. Examination of the chest was negative, except that there was hurried breathing and a few coarse râles. Heart was normal.

The next morning, after a sleepless night due to the abdominal pain, which was but partially relieved by morphin, gr. ¼, the patient had a violent paroxysm of coughing without expectoration, which lasted about half an hour. When I saw her a little later, there was some cessation of pain, the temperature was 100, pulse 92, with no more physical signs of chest disease than on the previous evening. I decided the condition was one of acute bronchitis, but could not account for the abdominal pain. That evening the condition was precisely as in the morning, except that pain was less (no more morphin given) and a slight, dry cough had developed. Patient slept well that night. On the morning of the third day the pain had ceased entirely, the cough was slight, but now was accompanied with mucopurulent expectoration. On auscultation, numerous fine crepitant râles were heard, but the breath sounds, while increased in number, were otherwise normal. Temperature 100, pulse 90, respiration 22. Patient felt much better, but toward evening the abdominal pain returned in greater intensity after a slight but natural movement of the bowels, and vomiting set in, again directing my attention to the abdomen. There was, however, no evidence of abdominal disease. There were no additional signs in the chest, although the cough and mucopurulent expectoration had greatly increased. Patient passed a good night, due probably to a ¼ gr. of morphin, necessitated by the severity of pain.

The next morning (fourth day of illness) pain and vomiting had ceased, and physical examination gave all the signs of an acute lobar pneumonia, involving the upper lobe of the right lung, and for the first time the patient complained of pain and constriction in the chest and dyspnea, and curiously enough the pain was wholly on the left side, which remained normal. Temperature was now 102, pulse 90, full and strong, respiration 28.

The patient then ran a typical course of pneumonia, the temperature falling by crisis on the twelfth day after the original onset of illness. On the second day of the pneumonic process, the abdominal pain returned, and continued in a slight degree during the entire course of the disease, subsiding entirely at the crisis, never to recur. There were no other abdominal symptoms nor any abdominal signs.

Convalescence was rapid and perfect. However, four weeks after I had discharged the patient as cured, edema and pain of the extremities suddenly developed, and death resulted in eighteen days from acute beri beri, which is so common among the native population. The attack of beri beri evidently bore no relation to the pneumonia for three weeks after discharge the patient was well and strong as ever and enjoying perfect health.

New Instrument.

A NEEDLE TO CARRY THE McGRAW ELASTIC LIGATURE.

JOHN M. BELL, M.D.
DETROIT.

The accompanying illustrations show a needle which I have devised to carry the McGraw elastic ligature. The needle is one solid piece of steel, with a slot in the end, into which the ligature is placed after being put on the stretch.

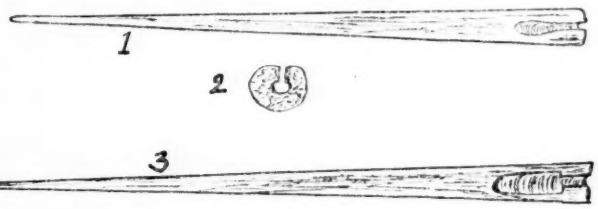

Fig. 1.—1, Needle to carry elastic ligature; 2, end view; 3, sectional view.

When relaxed the end of the ligature which lies in the groove expands sufficiently to hold it in place when being drawn into the stomach or intestinal wall. A large ligature can be used with a small needle by clipping a small piece from the side of the ligature near the end.

Alcohol.—Valentino has shown in the *Revue de Méd.* that the toxic effects of alcohol are due in part to its dehydrating power, as previously asserted by Dubois; the staggering gait to the toxic power of alcohol proper and the coma to the absorption of water from the nerve tissues.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, MARCH 12, 1904.

THE BODY-WEIGHT CURVE IN CHRONIC DISEASES.

The significance of the temperature curve for diagnostic, prognostic and therapeutic purposes in the acute and subacute diseases, is generally recognized. The clinical thermometer is diligently used by every practicing physician, by the trained nurse, and often by the laity independently of physician or nurse.

It was Gerhardt who first emphasized the fact that the body-weight curve is as important for the study of the nature, progress and treatment of the chronic diseases as the temperature curve is for the study of the more acute maladies. Nothing is more true than Gerhardt's statement, and yet it is but rarely in hospital or private practice that the advantages of keeping accurately a body-weight record over a longer period are fully appreciated. Many elaborate methods have been devised for studying the "total metabolism" in health and in disease. The methods are extremely difficult in application; the composition of the food and its energy-value in calories has to be determined; the relation of the incoming to the outgoing nitrogen has to be studied; the amount of carbon burned and of oxygen absorbed must be ascertained. As a substitute for these metabolic analyses, the procedure of direct calorimetry may be resorted to in the manner so well carried out by Atwater in this country. The more rapid and less circumstantial method of studying oxidation processes introduced by Zuntz and Geppert, in which the so-called "respiratory-quotient" is determined while the patient is fasting and at rest, while it has yielded results of scientific value concerning the temporary effects of work, food and drugs on metabolism, can yield us no reliable information regarding the total metabolism over a longer period than a few hours, or, if any, only clues as to the coarsest kind of deviation from the metabolic normal.

For a complete judgment regarding the measure of the oxidation processes in the body and the questions as to whether the total metabolism is pathologically high or low, and as to whether a given regimen is sufficient, is overabundant or is deficient, it is necessary to keep the patient for at least twenty-four hours at a time in a respiratory apparatus or a calorimeter, and, beside carefully analyzing the food, to make quantitative estimations of the nitrogen and carbon given off in the urine and feces. It is obvious that the necessary data for such a judgment could be obtained only in hospitals with outfits especially adapted for the purpose (like that of Professor Jaquet's in Basel), and that in ordinary hospital and private practice such things can not be thought of.

These complete experiments, desirable as they are for rigid scientific investigations, are totally impracticable, and, beside, wholly unnecessary in general practice, where, as a matter of fact, an approximate estimation of the metabolic relations is all, in the present state of our knowledge, that the physician needs in this connection to guide him in advising his patient; and such an approximate estimation, provided the kind and amount of food be known, is afforded by the simple observation of the body weight over a certain period.

In studying the body-weight curve, as Fr. Müller[1] has emphasized, certain details must be considered, such as the temporary changes in the content of the bladder and intestine, and, especially, the variations in the amount of water in the body which take place when a patient changes from one kind of diet to another, or in fever, in profuse sweating, in diminished water-absorption (as in stenosis of the esophagus or pylorus) and in the accumulation or absorption of exudates and edemas. Taking these things into account, the observation for a considerable length of time of the body-weight curve is one of the best means we have of judging the metabolic activities of the body. When the patient takes an ordinary diet, it is easy to estimate the nutritional value (i. e., to determine the energy-value in calories) of the food eaten, with sufficient accuracy for clinical purposes, by referring to Schwenkenbecher's tables.[2] A healthy resting man needs daily 33 calories per kilo of body weight; if his occupation is sedentary, 35 calories; if moderately active, 41, and if involving hard labor, about 48.

Not infrequently in people who are losing flesh without apparent cause, an estimation of the energy-value of the food taken in reveals the fact that, though the patients believe they are taking enough food and of the right kind, they are really not doing so; in such cases a readjustment of the diet usually brings the body-weight curve back to normal. Or, again, when on a well-arranged diet, fully sufficient in energy-value for the maintenance of the body weight of a healthy individual, a patient continues to lose flesh, a consuming disease of some kind, even when no other symptoms are obvious, may be safely predicated. A man with latent tuberculosis, even in the afebrile stage, may lose weight on a diet, the energy-value of which exceeds 50 calories per kilo. In locomotor ataxia and certain other chronic affections, the patients usually remain thin and pale, in spite of an abundant food supply, while in Basedow's disease, a patient with ravenous appetite, consuming food with an energy-value of from 60 to 70 calories per kilo of body weight, may progressively emaciate.

1. Müller, Fr.: Allgemeine Pathologie der Ernährung. v. Leyden's Handbuch der Ernährungtherapie und Diatetik, second ed., p. 189.

2. Schwenkenbecher, A.: Ueber die Nährwerthberechnung tischfertiger Speisen. Zeitschr. f. diatet. u. physikal. Therap., vol. iv, p. 380.

DEMONSTRATION OF TUBERCLE BACILLI IN FLUIDS.

Inoculation experiments to prove the tuberculous or non-tuberculous character of fluids which contain bacilli in too small numbers to be detected by the microscope, have always been only partially satisfactory, because of the length of time needed before a result can be obtained. Several weeks must elapse before the development or non-development of tuberculosis in the inoculated animal decides the question. Now Marmorek[1] announces the discovery of a new method which he asserts will give prompt results and enable one to prove the tuberculous character of a fluid within a few hours' time. The value of such a method to clinicians is obvious, and great interest attaches to this statement. Marmorek's explanation of the tuberculin reaction differs from that usually accepted. It is generally held that this reaction will take place only in an organism in which the histologic lesions of tuberculosis are present, and, therefore, not until some time has elapsed since the infection has occurred. Marmorek, however, holds that the tuberculin reaction takes place between the tubercle bacilli and the tuberculin; the latter as it comes in contact with the bacilli causes them to secrete a toxin which gives rise to the fever and other symptoms which make up the tuberculin reaction. The presence of tubercles is not necessary for this reaction, and, therefore, it should be possible to bring it about immediately after an injection of bacilli without waiting until they have set up structural changes in the organism. Accordingly, Marmorek has found that the characteristic febrile reaction can be obtained by the injection of tuberculin a few minutes after the injection of a small dose of tubercle bacilli. One cubic centimeter of a slightly opalescent suspension of tubercle bacilli is injected under the skin of a guinea-pig, and then after the lapse of from fifteen to twenty minutes it is followed by the injection of 0.3 c.c. of tuberculin—a dose too small to have any effect on a control animal. The temperature of the animal begins to rise almost immediately, and by five hours it has reached 40 C., or even higher. If a stronger suspension of bacilli is used, the animal may die of intoxication in a few days; the same result may be obtained if a larger dose of tuberculin is used. The interval between the administration of the bacilli and the tuberculin should be not less than fifteen minutes nor more than an hour and a half. After this time the reaction grows more and more feeble, and by twenty hours it fails altogether, owing, as Marmorek thinks, to the fact that the leucocytes have by this time incorporated the bacilli, and act as a barrier between them and the tuberculin. The appearance of the tuberculin reaction at a much later period, as in the usual procedure, Marmorek explains by supposing that the bacilli have become free again as a result of the disintegration of the leucocytes.

1. Semaine Méd., Dec. 23, 1903, p. 419; Société de Biologie, Dec. 26, 1903, p. 1650.

In his most recent publication[2] he states that it is necessary to modify slightly the above method when the number of bacilli in the fluid injected is extremely small, as may often be the case in pleuritic or peritoneal effusion, cerebrospinal fluid, sputum, urine, milk, etc. In such cases it is necessary to inject the tuberculin directly into the substance of the cerebrum. Half an hour after the subcutaneous injection of the suspected fluid the skull of the guinea-pig is trephined and one-eightieth of a drop of tuberculin is injected into the brain. The temperature then rises two or more degrees centigrade, while that of a control animal—which has received the intracerebral dose only—rises not more than one and four-tenths degrees, usually much less. Marmorek considers this method simple, positive in its results, and of great value in demonstrating the tuberculous character of fluids, which, by the older method, could not be demonstrated until after the lapse of several weeks.

A much more cautious and less optimistic statement is made by Nattan-Larrier,[3] who has been working in the same field in Dieulafoy's laboratory since 1900. He also finds that it is unnecessary to wait for the development of the anatomic lesions of tuberculosis before obtaining the tuberculin reaction, but his method is not as rapid as that of Marmorek. He has obtained his best results by allowing four to six days to elapse between the injection of the suspected fluid and the injection of tuberculin. Nattan-Larrier uses pregnant guinea-pigs, and makes the injection into the fibrous tissue around the mammary gland. His results were all carefully controlled by inoculation experiments, and his statements are cautious and carry conviction to the reader. While believing that this method may be used to demonstrate the presence of tubercle bacilli in a fluid long before the usual inoculation experiments could do so, Nattan-Larrier utters a warning as to its employment. The fact that the diagnosis must depend entirely on the rise of temperature in the animal makes it a delicate and doubtful experiment unless every possible precaution is used. The temperature of the guinea-pig is naturally variable, and it is, therefore, necessary to ascertain the normal variations of each animal before use, to employ a very sensitive thermometer, and to insert it into the anus at the same depth each time, otherwise errors may easily arise. As we have already seen, there is a difference of only six-tenths of a degree between the maximum temperature given by Marmorek for a non-tuberculous reaction—one and four-tenths degrees centigrade—and the minimum temperature for a tuberculous one—two degrees centigrade.

We shall await with great interest the further publications on this subject promised by these experimenters. A sure and rapid method for the demonstration of tubercle bacilli, which are too few to be detected by the microscope, will be an immense aid to the diagnostician.

2. Société de Biologie, Jan. 22, 1904, p. 60.
3. Ibid., Feb. 5, 1904, p. 135.

SUGAR METABOLISM THEORIES.

The number of theories advanced to explain a phenomenon or process in nature is often inversely proportioned to our understanding of that phenomenon. This is especially true in regard to the mechanism of sugar metabolism in the body, for we find here a long list of theories to explain it, while none of them is entirely satisfactory, and new ones are still being added. As early as 1886 it was observed that there are changes in the pancreas of patients who succumb to diabetes; and these observations led investigators to believe that the pancreas in some way regulates the consumption of sugar in the body. This view received a strong support in 1890 by the classical experiments of v. Mering and Minkowski. They removed the pancreas from dogs, and found that this operation is followed by marked glycosuria and other symptoms of diabetes mellitus. A partial extirpation of the gland was followed by a mild form of glycosuria, which, however, later passed into a severe form. On the other hand, de Renzi and Reale observed no symptoms of diabetes after extirpation of the pancreas; but their observations led them to believe that the sugar metabolism is controlled not only by the pancreas, but also by the salivary glands and the duodenum. This view they found substantiated by the fact that the removal of these organs was followed by glycosuria.

In view of the fact that a slight injury to the floor of the fourth ventricle of the brain, a brain tumor or concussion of the brain, often produce glycosuria, it has been held by some that the glycosuria following extirpation of the pancreas is not due to the loss of this gland, but to injury, during the operation, of the celiac plexus and other nerves of that region. The metabolism of sugar would, therefore, be under the direct control of the nervous system. A. and E. Cavazzani have demonstrated degenerative changes in the celiac plexus and in the nerves accompanying the hepatic artery, after removal of the pancreas, but it has been proven that these changes are not the cause of the glycosuria. If a portion of the pancreas of a dog is removed and transplanted under the skin, and the remaining portion of the gland then removed by a later operation, no glycosuria is produced by this operation, although the injury to the nerves is fully as great as when the pancreas is removed by one operation. The removal of the transplanted portion of the pancreas by a third operation is followed by glycosuria. These facts show that the pancreas in some way regulates the consumption of sugar, but how this is done is by no means clear.

Lepine then advanced the theory that the pancreas has an internal secretion of the nature of a glycolytic ferment, and that this secretion passes through the thoracic duct into the blood, where it is found in close relation to the white corpuscles. He asserted that he had found this ferment in diminished quantities in diabetic patients and in animals which had the pancreas removed by operation. This theory was vigorously attacked from all sides, and Arthus showed that the sugar in the blood, held in a vessel between two ligatures, does not disappear. If this observation is correct, there can be no glycolytic ferment in the blood. Many other objections to this theory have been brought forward, and Lepine himself has discarded it for a new one, according to which the pancreas (independent of an internal secretion) is supposed to destroy substances which prevent glycolysis in the tissues. It is still very widely held, however, that the pancreas has an internal secretion of the nature of a glycolytic ferment. Opie has shown that the islands of Langerhans are the chief structures concerned in human diabetes, and it may now be conjectured that they have an internal secretion which is necessary for the metabolism of sugar. Very recently Cohnheim[1] has shown that although extracts of either pancreas or muscle made by grinding up the frozen tissues and expressing the juices with a powerful press, are practically without glycolytic properties, yet a mixture of the two is capable of rapidly destroying relatively large quantities of sugar. He found also that blood serum, when mixed with the juices obtained from the pancreas and muscles, has an anti-glycolytic action, which would indicate that the oxidation of sugar does not take place in the blood but in the muscles, where it can furnish both heat and energy. It seems, then, that the islands of Langerhans of the pancreas have a secretion which, when mixed with a substance present in the muscles, forms a ferment that has the power of rapidly destroying sugar.

Cohnheim's views are, however, disputed by Blumenthal,[2] who claims to have made, from various organs, extracts which are capable of destroying large quantities of sugar. He states also that a dog can utilize sugar after total removal of the pancreas. Blumenthal favors the view that all tissues contain a glycolytic ferment, and that the liver may be of special importance in the oxidation of sugar. He admits, however, that a mixture of the extracts of pancreas and muscle destroys larger quantities of sugar than either extract alone, and it would seem, therefore, that Cohnheim's view is liable to be slightly modified as new facts are being discovered. In 1902, Croftan[3] published certain observations, from which it appeared that the destruction of sugar is promoted by the combined action of pancreas and albuminoid bodies, such as hemoglobin, which consequently would have to be wholly removed from the tissues employed in experiments like those mentioned in the foregoing to exclude definitely its action.

A TYPHOID FEVER CENTER.

Attention has been recently directed once more to the remarkable prevalence of typhoid fever in Pittsburg,

1. See THE JOURNAL A. M. A., Dec. 12, 1903, p. 1480.
2. Deutsche med. Woch., Dec. 17, 1903.
3. Phila. Med. Jour., 1902, p. 143; Am. Jour. Med. Sc., 1902, p. 669.

Pa., by the discussion in regard to filtration which has been carried on during several months by the public press of that city. When one of the leading newspapers of Pittsburg is moved to print an editorial under the caption "Our Typhoid Pre-eminence," it is evident that the situation must be recognized as one worthy of concern. Just how serious the conditions are may be gathered from the fact that the typhoid fever death-rate of Pittsburg has for some years outranked that of any other large American city. It is stated that in 1903 there were 473 deaths in Pittsburg from typhoid fever, a figure that would signify a death-rate more than four times as high as that in the city of Chicago during the same period. In the census year 1900 Pittsburg recorded 465 deaths from typhoid, or a death-rate of 14.49, as compared with a death-rate in the same year of 1.81 for New York, 1.98 for Chicago, 2.55 for Boston, and 3.47 for Philadelphia. The report of the Filtration Commission of Pittsburg, published in 1899, shows that this pre-eminence is not a new distinction, but that there has been for many years a marked and deplorable excess of typhoid fever in the city.

These facts are by no means unknown to the inhabitants of Pittsburg. A movement to purify the water supply was set on foot some years ago, but the plan has failed of full fruition. It is now hoped that the arrangements for a comprehensive filtration system, which have so long been allowed to hang fire, will soon be put into execution. Since it seems to be true that the cities of Chicago and Philadelphia, long signal offenders in the matter of a pure water supply, are about to lose their unfortunate pre-eminence, Chicago, through the completion of its system of intercepting sewers, and Philadelphia, through the construction of an admirable sand filter plant, it is hardly to be supposed that a city so wealthy and ambitious as Pittsburg will allow itself to assume a rôle of such unenviable notoriety.

There is one feature in this connection which we believe has not received sufficient attention, namely, the intimate sanitary interdependence of communities geographically and commercially related. The section of Western Pennsylvania around Pittsburg and Allegheny has long been known to be grievously infested with typhoid fever. The recent outbreaks at Butler and Kittanning are still fresh in the minds of our readers. It does not seem unfair to assume that the extended diffusion of typhoid fever throughout this region must be laid in large part at the door of the city of Pittsburg. It is clearly impossible to calculate exactly how many persons may have contracted typhoid fever during visits to the metropolis of Western Pennsylvania, and have returned to their homes to furnish the material for fresh outbreaks. It needs no argument to show that the infected water supply of a large city may diffuse its baneful influence far beyond the limits of the community immediately responsible for its existence, and may serve to light up new foci of infection in scores of innocent towns and hamlets. The exceedingly mischievous character of a highly infected water supply in any great center of population and commerce can hardly be overestimated. The whole country is directly concerned in having the situation at such infected centers corrected promptly and effectively. The ever-widening circle of infection that spreads out from such a focus of typhoid fever as that at Pittsburg menaces the health of even far distant communities. It is almost a matter of national importance.

CONCERNING MERCURIAL EXANTHEMATA AND IDIOSYNCRASY TO MERCURY.

Considering the fact that, if all forms of the drug are included, mercury is one of the most frequently used medicaments in the Pharmacopeia, it is of great importance to recognize the skin lesions produced by it. It is only recently that we have appreciated that not only the use of mercury by the skin, but also its internal and subcutaneous administration, may lead to cutaneous lesions which closely resemble certain of the exanthemata or specific skin diseases.

In a recent article, Tomasczewski[1] reviews the question of the mercurial exanthemata, illustrating his points by cases of his own, and by others cited from the literature. His views regarding the importance of certain conditions underlying mercurial skin lesions are somewhat at variance with general opinion. He points out that the method of application of the mercury is of minor importance, and that exanthemata may be produced by the oral, hypodermic or dermic administration of the drug. He qualifies this statement by admitting that in applying the drug externally more of it is necessarily brought into contact with the skin than is the case when the oral or subcutaneous methods are used. It has been generally held heretofore that the internal administration of mercury did not cause exanthemata. In considering individual idiosyncrasies he follows Jadassohn in holding that there are two classes of individuals subject to toxic eruptions—those who have a general hypersensitiveness of the skin, in whom any irritating substance will produce skin lesions, and those who have a special or specific hypersensitiveness to certain drugs which are not necessarily of an irritating nature.

In this paper Tomasczewski discusses only the true mercurial exanthemata, which are to be distinguished from the ordinary acne mercurialis of the hairy surfaces, and the fugitive mercurial dermatitis most common in the axillæ and groins, both of which are associated with the local application of the drug. The true mercurial exanthem may occur after the administration of the drug in any form. The eruption in these cases is varied, and no less than seven types may occur. Tomasczewski cites cases resembling measles, cases resembling scarlet fever, those resembling purpura hemorrhagica, those re-

1. Zeitschrift für klin. Med., vol. li, Nos. 5 and 6.

sembling erysipelas, erythematous and urticarial eruptions, and eruptions simulating pemphigus vulgaris. The urticarial eruptions and those resembling scarlet fever are fairly common, the other forms rather rare. In the form simulating measles, all of the symptoms and signs of the disease, including a diazo-reaction in the urine, may be present, and scarlet fever may be mimicked as closely. The pemphigoid form is most difficult of diagnosis, but is infrequent. In discussing the diagnosis of mercurial skin lesions in general, the author lays stress on the tendency to extensive desquamation, and the peculiar violet-red color of the lesions. Needless to say, the history of the use of mercury, and the fact that recovery follows the discontinuance of the drug, is of great importance, as is also a recurrence of the lesions on the resumption of the mercury.

THE BUTLER EPIDEMIC.

With the closing of the emergency hospital February 25, the typhoid epidemic at Butler, Pa., may be fairly said to have come to an end. The total number of cases during the outbreak has been about 1,364, and the number of deaths 115. A noteworthy and deplorable feature of the epidemic has been the infection of some twenty of the nurses, amounting to nearly 10 per cent of the number employed.

THE ANTI-SPITTING CRUSADE.

At present there seems to be a revival of the anti-spitting crusade, and we hope it will be more effective and permanent in its results than have been previous endeavors along this line. In a number of cities active measures have been taken, and persons have been surprised at their arrest for what they considered the exercise of a natural right. The danger from sputa is a real one, though it may sometimes be exaggerated, but there is enough otherwise objectionable in the habit of itself to make it condemnable. As it has been permitted in the past, no one can question the fact of its having been a nuisance. There is, of course, a certain hardship to persons who have to expectorate, and the habit of carrying pocket cuspidors will be very slowly acquired, and perhaps never will become a general one. But the disgusting practice of spitting on sidewalks, in street cars and on floors generally, is not an excusable one under any circumstances, not even on the ground of necessity.

THE EXPLOSION OF CURRENT BELIEFS.

One of the results of the ceaseless investigation which characterizes the medical world of the present, is the retesting of many of the theories, which, on account of their age, or their apparent rationality, have almost assumed the finality of facts. Most of us can remember the time when the idea that appendicitis was generally caused by foreign bodies was current, an idea which still exists in the minds of most of the laity. And now comes an article by Prettin and Leibkind[1] which shatters our current belief regarding the prevalence of emphysema in glass blowers. If ever a theory seemed rational and well grounded, that which regarded wind-instrument players and glass blowers as particularly prone to emphysema would seem to have been one. The examination of two hundred and eighteen glass blowers by the authors mentioned showed only five cases of emphysema, a result which is decidedly destructive to the current belief on this point. Fischer's article[2] of two years ago showed almost identical results so far as wind-instrument players were concerned, as he found that in five hundred military musicians there was no case of emphysema, even in individuals over fifty. Thus another idol is shattered.

1. Münchener med. Woch., Feb. 9, 1904.

MEDICAL INFLUENCE AND JAPAN'S DEVELOPMENT.

In a recent interview, a rather prominent Japanese resident of New York, Dr. Takamine, whose name is well known in medicine in connection with adrenalin, taka-diastase and other preparations, is reported to have given his opinion as to the methods by which Japan was opened to the world and so successfully induced to adopt the methods of western civilization. According to him, even under the old régime when intercourse with outsiders, save in a limited way with the Dutch was forbidden, western medicine had made its way into Japan and was exerting its influence, not only in a sanitary way, but as a general civic factor introducing occidental methods of thought and life. He points out that the personnel of the ministerial cabinets that have existed under the mikado's rule in Japan in the last thirty years, or thereabouts, have all been more or less influenced by western medicine; a very large proportion of their members, 40 to 60 per cent., were either medical men or sons of medical men, or else had been in direct contact with medical practitioners of the west. Marquis Ito, the "grand old man" of Japan, came from a family, almost every man of which has been connected with the medical profession. As the *Chicago Tribune* says, this showing is equally complimentary to the vigor of medical science and to the intelligence of Japan. It is possible that Dr. Takamine overestimates the influence of medicine in the progress of his country, but that it has been an important factor seems evident enough from the facts he adduces.

THE NEW YORK STATE MEDICAL ASSOCIATION.

Step by step the details are being completed in making the medical profession of New York one united body, which shall press on to greater achievements for the honor and triumph of medicine. The change is a great one, and perhaps—as the details have worked themselves out—it becomes more of a change to the members of the New York State Medical Association than to those of the Medical Society of the State of New York. The latter body has approved of the plan of union, and its county societies are rapidly following its lead and approving the action. On the 21st of this month the association will meet to ratify the action. This appears to some, and no doubt is in truth from one point of view, a termination of the career of

2. Münchener med. Woch., No. 17, 1902.

the New York State Medical Association. Its name ceases, and its separate existence ends, but in a far broader and more practical sense it now enters into a new life. The New York State Medical Association has an enviable history of over twenty years which requires no apology. Organized through staunch loyalty to the national body at a time when discord rent the New York profession, it has maintained the principles of the American Medical Association these years without discredit. Through circumstances over which there appears to be almost universal congratulation, the sources of the discord have been removed. Having served faithfully as the representative of a portion of the medical profession of the State of New York, the association now steps out into the wider sphere and represents the whole profession. By remarkable liberality and courtesy, it relinquishes its own name to take another, but it is the spirit of the association which lives on. It is a noble act, one fitting to close such a twenty years' record as is now about to be handed down to history as a finished product. It is not easy to surrender the traditions of even twenty years without some pangs, and it is only natural that the members of the association—some of them more than others—feel that the sacrifice they make in this reunion is very great. It is a feeling that all will respect; but the purposes and ends of all this labor seem thus far to triumph over lesser considerations. The spirit of loyalty and of sacrifice shown by the members of the association is one of the grandest legacies which they can bequeath to the new organization. The medical profession of the whole country owes its thanks to the members of the New York State Medical Association, a body which will always have its honored place, and none the less for what sacrifice it has made, in the medical history of our country.

HEALTH BOARDS AND POLITICS.

Boards and departments of health are generally supposed to be institutions for the protection of the public against disease and not merely political machines. This fact is recognized in some municipalities, but unfortunately not in all, as some recent experiences demonstrate. The San Francisco Board of Health, during the Gage administration in California, was a body of officials in whom the people of the country had confidence as a defense against a possible epidemic of plague and its extension from the focus that existed in the city under its sanitary control. Now matters have changed; the present mayor has at last succeeded in changing the whole personnel of the board, supplanting the former members by those who can be expected to be more subservient to his commands regardless of their duty as conservators of the public health. As an evidence of what they are willing to do at his behest, we have the general discharge of the tried employes of the former board, as shown up editorially in the February issue of the *Occidental Medical Times*. There were six cases of plague reported in San Francisco by the Public Health and Marine-Hospital Bulletin during February. The infection still exists in that city, but we have the assurance that a political partisan board, appointed in the place of the one discharged because it did its duty, has now the responsibility of the protection that the city can afford itself and the country against the scourge. Is it a legitimate assumption that they will efficiently perform the duty for the doing of which their predecessors were ousted? This is not a matter that concerns San Francisco alone; it is one for the whole country to consider. If we had to depend on the San Francisco Board of Health, appointed by and presumably in full sympathy with a mayor whose whole object and aim has been apparently to deny the existence of the plague and obstruct all efforts against its spread, we should be in a bad way indeed. Another instance of the removal of a tried official for political reasons is noted in another of our contemporaries, when the principal officer of a board of health was removed for the reason, as given by one of the politicians, that "this plum should be passed on." We might multiply examples of this sort of malfeasance in office by politicians prostituting charitable institutions to the demands of party politics and unscrupulous partisans *ad nauseam*, but it is unnecessary. That such things can occur is one of the disgraces of our times, and we would be remiss in our duty if we neglected to utter our protest. It is not the individual who suffers in these cases; it is the people as a whole, and that they do not suffer more is due to the unthanked and often gratuitous efforts of honest members of our profession to counteract the evils that follow.

SANITARY RELATIONS OF THE PANAMA CANAL.

Panama Canal problems are numerous enough, but one complicates them all, namely, the question of sanitation. It was one of the arguments used in favor of the Nicaragua route that it is comparatively healthful, and it certainly has no such record as that of the Panama isthmus. It was said that when the railroad was built across the isthmus every tie cost a human life, and the French Canal Company, which our government proposes to succeed, had a history not much more encouraging as regards the healthfulness of the work. There is no doubt that much of the mortality that went with the work of the past can be avoided in the future; that is, if the sanitary arrangements be under the absolute control of some one who understands what preventive measures are needed, and who will see that those measures are adopted. Our knowledge of tropical disorders has greatly advanced within the past few years, and the two most formidable ones to be fought on the isthmus—malaria and yellow fever—are practically under medical control. To a very great extent, the same is true of the other less serious tropical disorders; nearly all are parasitic, and may be avoided by the observance of due sanitary precautions. The isthmus itself is not so essentially unhealthy for a tropical region; the greater part of the work is in a region several hundred feet above the sea, and with good natural drainage, where the conditions are certainly as good as could be looked for in any non-mountainous tropical country subject to the rainfall that occurs at Panama. The immediate vicinity of the Caribbean terminus of the canal is low and marshy and furnishes perhaps the most serious problem of sanitation of the whole route. The region near Panama

is also low but drier and more easily brought under sanitary control. In both these regions a considerable portion of the work is already done, and what remains is but a very small fraction of the whole; the bulk of the excavation, therefore, is in the higher and healthier uplands. Thus, so far as the natural conditions are concerned, there is reason to hope for a decided improvement on the record of the past. It is in the policing and control of the personnel and the enforcement of sanitary regulations, both in the canal force and among the native population, that we must look for most aid in reducing the excessive mortality of the past. With our experience in Cuba and the Philippines we ought to be better able than heretofore to satisfactorily meet the conditions, especially if the digging the canal is under military control that was elsewhere so successful. We can not expect to escape a certain amount of mortality and disability from diseases incident to a tropical climate, but there is reasonable hope that sanitary measures will reduce them to a minimum.

THE CIRCULATING MEDICAL ARTICLE.

Some months ago we commented[1] on the remarkable performance of one Plympton of Brooklyn, who succeeded in having an article on "Septicemia and the Curette" published in over a score of journals. Plympton now has a rival in this sort of notoriety. We recently were offered, by Dr. H. John Stewart or, according to some papers, John H. Stewart, an article entitled "The Finsen Light Cure"—a nicely worded advertisement for a Finsen light cure institute in Chicago. We did not accept, but we have been interested to note that the bait has been taken in different parts of the country, for already twenty journals have published the article as original. It is interesting to note that this Finsen light company is following up the free advertising accorded it in the medical journals by large displays in street cars and lay magazines, and by sending out circulars in which its confidence in the panacean qualities of the light is touching and sublime. The *Memphis Medical Monthly* notices that the article referred to has appeared in several journals, and says:

While we can not blame an author for wishing to secure wide circulation for an article, and can see no harm in simultaneously securing publication of a deserving contribution in a local medical journal and in one of the larger weeklies, yet we must deprecate the practice which we see occasionally indulged in, as did this author. It is not that the medical journals care very much about this imposition, but it would seem to indicate that the author's fund of information is too limited to permit his adding greatly to the stock of medical literature, so he must make the most of what little he does write, however indifferent it may be in quality.

Apparently this editor had not discovered the gentleman of color in the woodpile, but the editor of the *Medical Council* had his eyes open. Under the heading of "Sold Again," he comments on the light-cure article thus:

The same article was sent to us for publication, but we saw the nicely disguised advertisement contained in it, and suspected that it was another attempt to palm off a "multiple copy" on the medical journals as original.

1. THE JOURNAL A. M. A., Nov. 22, 1902, p. 1327.

The editor of the *Medical World,* when he received his manuscript of this remarkable publication, "had a suspicion that all was not straight," so he wrote to the author asking if he had sent or intended to send the article to any other journal for publication. He says he received the following letter in reply:

You need not hesitate about printing this article, for the same article will not appear in any other journal, you having received the original and the carbon copy being still in my possession.

Perhaps it would be charitable to say that the author's typewriter answered this letter inadvertently without referring it to him. The editor of the *Medical World* apologizes to the readers of that publication for having been misled into thus imposing on them by printing the article. He gives the names of nine other journals which printed it. We had thought of doing the same with the twenty, but we forbear. Although we are ourselves by no means infallible, we may be allowed to say that in view of the fact that among the journals which have published this article were a number of the better journals of the country and three weeklies, the comment with which the editor of the *Medical Council* concludes his remarks appears to us exceedingly appropriate: "Doctors, we beseech you to examine more closely manuscripts submitted to you."

Medical News.

ILLINOIS.

Diphtheria.—Several deaths are reported to have occurred at Marquette, a village near Spring Valley.——Schools at Gilman have been closed on account of the prevalence of the disease.

Heavy February Mortality and Morbidity.—Deaths in Springfield numbered 96 for February, 60 more than for the corresponding month of last year. In February, 1903, there were 12 cases of scarlet fever, with no deaths; in February, 1904, 51 cases and 2 deaths; there were 5 cases of diphtheria and 2 deaths last month, and in the same month of 1903, 9 cases and one death; of smallpox 4 cases and one death were reported in February, 1903, while in February, 1904, only one case was reported.

Chicago.

Personal.—Drs. Herman A. White and G. Morgan Clarke have returned from Europe.——Dr. Lucy Waite has returned from Tahiti.

Assistant Superintendent Johnston Dies.—Colonel William James Johnston, a confederate veteran, and for many years assistant superintendent of St. Luke's Hospital, died March 1, from Bright's disease, aged 59.

The Week's Deaths.—The death rate for the week ended March 5 was equivalent to an annual mortality of 16.71 per 1,000. Pneumonia caused 165 of the 625 deaths; consumption, 54; heart diseases, 51, and violence, 38. The death rate for the corresponding week of 1903 was 16.45 per 1,000.

Crusade Against Spitting.—The anti-spitting ordinance is suffering its first enforcement. Many careless spitters have been arrested, and some have been fined. A few pleaded ignorance, and one of the pioneers in the anti-spitting movement is alleged to have been one of the first offenders arrested.

February Mortality.—Pneumonia caused 686 deaths; consumption, 278; heart diseases, 195; Bright's disease, 165; bronchitis, 141, and violence, 148, out of a total of 2,705 deaths, equivalent to an annual mortality of 17.92 per 1,000. This is a lower rate than for February, 1903, which was 18.30 per 1,000.

Pneumonia in Excess.—With 56 days of the pneumonia season to come, the prediction of the department of health that deaths from pneumonia would exceed 2,100, the estimated number is already passed. Up to March 5, a total of 2,186 deaths from the disease have been reported, and if the daily average be maintained, the number at the close of the season will be about 2,800, or one-third more than was estimated.

Again in Trouble.—Dr. A. W. Van Bysterveld, a practitioner said to be unlicensed, who has two offices in Chicago and one in Grand Rapids, Mich., was shot in the leg, March 8, by the father of a patient, an epileptic girl, aged 15, whom he is said to have wronged. This is apparently the "miracle-worker" of the same name who was noted in THE JOURNAL of March 21, 1903, as having been fined $100 and costs, at Grand Rapids, for practicing medicine without a license.

Free Antitoxin For Poor.—The Chicago Department of Health, in its current bulletin, makes the following announcement:

1. Physicians may obtain antitoxin free from the antitoxin stations of the department for the gratis treatment of their charity cases.

2. Physicians may have their prescriptions for antitoxin to use in their paid practice filled by any antitoxin station at the following (present) prices:

No. 1 (1000 units)	$0.75
No. 2. (2000 units)	1.25
No. 3 (3000 units)	2.25

The physician obtaining free antitoxin receipts for it, and the receipt contains the following certificate:

I hereby certify that the family of this patient is unable to pay for the antitoxin; that the case is urgent; that I am attending without fee and that I will report the termination of the case on the postal card form of the Health Department furnished by the druggist.

All cases in which free antitoxin is furnished will be investigated by the Bureau of Charities, but the antitoxin will be furnished first; the investigation will follow.

MARYLAND.

Personal.—Dr. James Bond, Westminster, who has been in Europe for the past year, has returned home.

Bills Drafted and Offered.—Bills have been drafted for presentation to the legislature for the granting of a charter to the Washington County Hospital Association, Hagerstown, for an annual appropriation from the state of $6,000 to enable the county commissioners and mayor and council of Hagerstown to levy annually for certain sums for the support of the hospital. ——Appropriations are also asked from the state for the Baltimore Eye, Ear and Throat Hospital, $10,000 for the Hospital for Consumptives near Baltimore, instead of $2,000 annually as now, and the Franklin Square Hospital, Baltimore.——A bill has been offered in the legislature prohibiting the use of wood alcohol in compounding flavoring extracts.

Appeal for Library.—In reference to the bill introduced into the legislature for an appropriation of $100,000 for purchase of a lot and erection of a fireproof building for the library of the Medical and Chirurgical Faculty of Maryland, the committee in charge has issued a circular in which occurs the following:

It has taken a great many years to get this library together, and its destruction by fire would be an irremediable loss to the entire people of the state as well as to the medical profession. The grounds on which we base an appeal are that the library is an educational factor of the greatest importance; that though vested in the state medical society, it is to all intents and purposes a public medical library, being accessible to all physicians of good standing and to all students of medicine. Should this library be destroyed no amount of money could replace it, for there are many valuable works now out of print and extremely important sets that can not be duplicated anywhere.

Baltimore.

Personal.—Dr. Thomas J. O'Donnell, resident physician of St. Joseph's Hospital, was operated on for appendicitis on March 3.

February Mortality.—The mortality in February was unusually large, pneumonia, la grippe and consumption predominating. There were 203 deaths from pneumonia, against 153 for last February, and 142 from tuberculosis, against 91 for last year. The total deaths were 1,024, as compared with 862 for 1903; 750 births were reported.

Heavy Mortality for Week.—The total deaths for the week ended March 5 reached the high figure of 302, which is 100 more than the corresponding week of last year. This is equivalent to a rate of 27.97 per 1,000, or separating whites and blacks, of 24 per 1,000 for whites and 49.52 per 1,000 for blacks; 75 died from pneumonia and 90 from other affections of the respiratory organs.

Literary Fire Losses.—Among losses by the Baltimore fire were the entire unsold remainder of Professor Ashby's work on gynecology, Dr. Hubert Richardson's work on the thyroid gland, which would have been out the following week, and the current number of *American Gynecology*. All these were in the printing and publishing establishment of Williams and Wilkins, which was entirely destroyed. Dr. Richardson fortunately has the proof of his work, and thus the arduous labors he expended on it through the past several years will not be entirely lost. The Johns Hopkins Press fortunately escaped.

Johns Hopkins Losses.—At the annual meeting of the Johns Hopkins Hospital trustees, held March 3, it was definitely announced that John D. Rockefeller had sent an agent to investigate the needs of the hospital. Nothing definite, however, in the way of an offer of assistance was made. The announcement was made that $60,000 of the annual income of the hospital had been cut off by the fire. This is the nearest approach that can be made at present to the loss; committees have been appointed to investigate the exact figure and also the insurance. Dr. Hurd, superintendent, stated that the needs of the institution had been presented to Mr. Rockefeller by Dr. William H. Welch. Sixty-four buildings belonging to the hospital were destroyed, on which only 80 per cent. of the total amount of insurance carried can be gotten. "There is a disposition on the part of the trustees," said Dr. Hurd, "to go ahead with the work of the hospital in spite of the loss incurred." Judge Henry D. Harlan was re-elected president of the board.

MASSACHUSETTS.

Personal.—Dr. A. Everett Austin, Boston, of the faculty of Tufts College Medical School, will spend the next seven months in study in Ludwig's bio-chemical laboratory at Vienna.

Thousands for Crippled Children.—The fair held at Hotel Somerset, Boston, by the Back Bay ladies on March 3 and 4, netted the Industrial School for Crippled and Deformed Children $7,000.

Senate Kills Bill.—The senate has voted not to pass a bill which had the approval of the house but the opposition of the public health committee, to further regulate the examination of bodies before embalming and burial.

Pauper Institutions Need Money.—The trustees of pauper institutions in Boston, in support of their pleas for an appropriation of $187,000 for this year, state that they have now under their care 830 sick or destitute people, 80 per cent. of cases admitted during the last year having been sent directly to the hospital, which must soon be enlarged.

Embezzlement Cripples Consumptive Home.—St. Luke's Home for Consumptives, Roxbury, is seriously embarrassed by reason of the embezzlement of at least $34,000 of its funds, and probably many thousands more, by its treasurer, Wallace H. Ham, who also took almost $200,000 from the American Surety Company. This home has done a good work in caring for this class of patients for which the city of Boston officially does so little.

Against Restriction of Animal Experimentation.—Vigorous efforts to introduce in the legislature a bill to further restrict animal experimentation in Massachusetts were combated before the committee on probate and chancery by the able arguments of Prof. H. C. Ernst, who represented officially Harvard Medical School, Tufts Medical School, Boston University Medical School, the Massachusetts Institute of Technology, Clark University, and various other educational institutions in the state and also local boards of health. He presented a protest signed by thirty-one of these boards in cities and towns.

NEW YORK.

Smallpox has again appeared at North Tonawanda and Niagara Falls.

Three More Ratifications.—In addition to the fourteen county societies mentioned last week, the Montgomery, Orange and Rockland county medical societies have ratified the plan of union of the New York State Medical Society and the association.

Personal.—Dr. Joseph A. Lanahan, Albany, has been made a member of the staff of the State Hospital for Insane Criminals, Dannemora.——Dr. Warren L. Ayer has been made health officer of Owego.——Dr. Martin S. Reed has been reappointed health officer of Coeymans.

For Study of Defectives.—A bill to establish a laboratory for the study of the criminal pauper and defective classes is proposed to be introduced in the legislature. Such a bureau would have for its purpose the gathering of data of sociologic, pathologic or abnormal conditions.

Crippled Children's Hospital Report.—The New York State Hospital for the Care of Crippled and Deformed Children, Tarrytown, recently has sent out its report for the year ended September, 1903. Dr. Newton M. Shaffer of New York is surgeon-in-chief of the hospital, and Drs. Roswell Park and Charles G. Stockton of Buffalo are on the consulting staff. The board

of managers express the wish that the names and addresses of poor children who are crippled and deformed be sent to the surgeon-in-chief at Tarrytown.

Buffalo.

Personal.—Dr. Harvey R. Gaylord has returned from Europe. ——Dr. Albert H. Briggs was appointed grand state medical examiner of the A. O. U. W.——Dr. Chauncey P. Smith recently fractured his left leg by slipping on an icy sidewalk.

Report on Cancer Research.—The fourth annual report of the work of the cancer laboratory of the New York State Board of Health conducted at the Gratwick Research Laboratory University of Buffalo for a period beginning in 1902 and ending in 1903, was transmitted to the legislature. It contains the report of the director, Dr. Roswell Park, and several scientific papers, all pertaining to investigations bearing on the question of cancer. Many of the papers are illustrated with microphotographs.

Oppose Optometry Bill.—The Buffalo Academy of Medicine has been informed that a number of physicians have signed postal cards circulated by opticians favoring the passage of their bill now before the legislature as Senate Bill No. 378. A closer examination of this bill shows that it is a permission to practice medicine. It has been condemned by resolutions of the New York State Medical Society, by the Buffalo Academy of Medicine, and by the medical press. The Buffalo Academy of Medicine has recommended that the medical profession write personal letters to their representatives at Albany in opposition to this bill.

New York City.

Personal.—Dr Joseph Brown Cooke has been appointed adjunct professor of obstetrics in the New York Polyclinic.

German Hospital Bequest.—By the will of John Schultheis, who died February 4, $1,000 is bequeathed to the German Hospital, Williamsburg.

Pneumonia Season Mortality.—During the current pneumonia season, from November 1 to March 5, New York reported 26,195 deaths, 5,506 being due to pneumonia, and 2,908 to tuberculosis.

Club Rooms and Library Opened.—The Eastern Medical Society of the City of New York opened its library and club rooms March 1. Addresses were delivered by Drs. Abraham Jacobi, Kenneth W. Millican and Joseph D. Bryant, and a concert and supper followed.

Pneumonia and Consumption.—For the week ended March 5, 1,800 deaths were reported, 460 of which, or 25.5 per cent., were due to pneumonia, and 188, or 10.4 per cent., to consumption. Bellevue Hospital has about 300 cases of pneumonia, and other hospitals have a proportionate number. At Bellevue the influenza bacillus was found in about 70 per cent. of the respiratory cases.

May Remove Consumptives' Home.—On the complaint of neighboring property holders that the Consumptives' Home, Brooklyn, is a menace to their health, Assemblyman Remsen has introduced a bill authorizing the commissioner of health to investigate the conditions at the institution, and, if he sees fit, to provide for the removal of the inmates to some other place provided by the trustees.

Regret Dr. Weir's Retirement.—On the retirement of Dr. Robert F. Weir from the chair of surgery, which he had held for ten years, the faculty of the College of Physicians and Surgeons unanimously passed resolutions setting forth the eminent services rendered to his alma mater by Dr. Weir, during the thirty-six years of his official connection with the institution, and eulogizing him as teacher, surgeon, and man.

Dinner to Dr. Roosa.—On March 1 about 400 physicians, representing the cis-Mississippi division of the United States, met at a dinner at Delmonico's in honor of Dr. D. B. St. John Roosa, and to commemorate the twenty-one years since the inauguration of postgraduate medical instruction in this country. Dr. William Osler, Baltimore, presided, and at the speaker's table were seated Drs. Roosa, William T. Bull, New York; Clarence J. Blake, Boston; William M. Polk, New York; William J. Mayo, Rochester, Minn.; John H. Musser, Philadelphia; Maurice H. Richardson, Boston; Edward G. Janeway, New York; William W. Keen, Philadelphia; Robert F. Weir, New York; William H. Welch, Baltimore, and John A. Wyeth, New York. A massive silver loving-cup was presented to Dr. Roosa, Rev. Dr. Vincent making the presentation address. Dr. Osler reviewed medical progress for the last twenty-five years, and suggested the following steps in advance which ought to be taken: Third and fourth year students should have the right to pursue their studies in hospitals; a better equipment and more schools for scientific investigation should be provided; interstate reciprocity of medical licensure is essential, and consolidation and unification in medical teaching is the fourth improvement needed. He prophesied that in ten years there would be only one medical school in New York. Dr. Clarence J. Blake, Boston, introduced as a "special specialist," spoke on the need of postgraduate instruction for the specialist, and suggested that the present practice of specialties contained an element of danger to the public by reason of the lack of a proper standard of instruction. Dr. William W. Keen, Philadelphia, in his address on "The Necessity for Increased Endowment for Medical Institutions," referred to the increased commercial value to the people at large of the work of the physician and cited as examples modern sanitation in Cuba, with its practical abolition of yellow fever; the diminution of susceptibility to bubonic plague, smallpox and malaria. He referred to the work of the profession in the direction of preventive medicine, and gloried in the fact that the medical profession was the only one on the earth which was bending its energies toward self-destruction. He called attention to the fact that the endowment for theological schools amounts to $2,250 for each student, while the endowment for medical schools amounts to only $83 per student. Dr. William M. Polk, New York, called medical teaching as it exists in most institutions an absolute farce, because in many of its branches it is conducted solely for the benefit of the teacher. The public should be made to appreciate that it is absolutely necessary to use the human body to obtain the very essence of that knowledge necessary to make medicine a perfect work. Civic pride in medical institutions did not exist, because the institutions had not yet reached the requisite condition of efficiency. Dr. Roosa, in conclusion, said:

> To men of great affairs in trade, commerce and politics the medical profession sometimes may seem inferior. We may perhaps be thought mere hewers of wood and drawers of water to the priests and Levites who minister at the great temples of the world, but not so. We can very properly compare ourselves to the engineers and stokers of a great man-of-war, or better, a great transport of passengers and freight.
>
> We are not seen, we are grimy and often worried with the struggle, but it is we who keep down the epidemics, who prevent cholera from coming to our shores, who stamp out yellow fever, and who are planning that that day shall come foretold by the prophet 2,000 years ago, "when no man shall say that I am sick," but, like the one-hoss shay, shall finally, in the fruition of his days, pass into the other life by a general breaking up, no one part failing before the other, and so cease to exist.

OHIO.

Personal.—Dr. Samuel S. Wilson, Xenia, president of the Greene County Medical Association, has gone to Cuba for a month.——Dr. S. D. Clayton, Cincinnati, has been appointed to the Board of Pension Examiners to fill the vacancy caused by the death of the late Dr. Spencer. Dr. P. S. Connor, Jr., Cincinnati, has been appointed district physician in place of Dr. Harry Thomas, resigned.

Typhoid in Cleveland.—On March 1 51 cases of typhoid fever were reported, the largest in any one day in the history of the present epidemic. During February 465 new cases were reported, with 45 deaths. The epidemic is believed to be due to polluted lake water, the new tunnel not being as successful in supplying pure water as was expected. The health officer favors a filtration plant, but is opposed by the city officials and council.

Medical Semi-Centenary.—Dr. Benjamin R. McClellan, Xenia, entertained the Greene County Medical Association and a number of invited guests from other cities at a dinner given in honor of the fiftieth medical anniversary of his father, Dr. Harvey B. McClellan. Dr. Clark M. Galloway, Xenia, officiated as toastmaster. Drs. Starling Loving, Columbus; Isaac Kay, Springfield; Hudson B. Stevens, Columbus; John C. Reeve, Dayton, and Thad A. Reamy, Cincinnati, responded to toasts, and the guest of honor was the last speaker.

Jewish Hospital Improvements.—Plans are being drawn for a number of improvements to be added to the Jewish Hospital, Cincinnati. These consist of a nurses' home, a large power plant, which will supply the energy for heat and light to the hospital and its supplemental buildings, as well as for the Home of the Jewish Aged and Infirm situated near the hospital. The most important of the new buildings will be a children's hospital of large size. The cottage plan of building will be the one used. This work will all be done by private subscription, and already large sums have been donated by the wealthy residents of the city.

PENNSYLVANIA.

Philadelphia.

Quarantine Lifted.—The quarantine on the medical department of the Episcopal Hospital established several weeks

ago has been lifted, and general work in this department is again established.

Small Fire in Hospital.—On March 5 a fire occurred in the drying room of the laundry in the Kensington Hospital for Women. The flames, however, were early controlled, and little damage was done.

Wholesale Vaccination.—Dr. Thomas J. Beattie, assistant medical inspector, accompanied by a corps of 42 vaccination physicians, recently raided the foreign quarter of the city and vaccinated over 600 persons, mostly children of school age.

Will Not Sue for Water Pollution.—There is no foundation for the report that proceedings were instituted in behalf of Philadelphia against Norristown and other municipalities which are believed to pollute the Schuylkill River by emptying drainage into it. Dr. Alexander C. Abbott, chief of the bureau of health, has advised that no steps be taken in this direction.

Baby-farmers Arrested.—During the past week three more proprietors of the so-called "baby farms" were arrested in this city. During the past year 60 infants have been found on doorsteps, or dead in vacant lots. The authorities believe that many of these foundlings come from these dens and not from individual homes, as was formerly supposed. It is also believed that many of these infants are used for blackmailing purposes, while others are disposed of by different means.

Reception to Ridlon.—The Epsilon Chapter of the Alpha Kappa Kappa of Jefferson Medical College, gave a reception in honor of Dr. John Ridlon, Chicago, at their chapter house, February 29. The members of the faculty of Jefferson Medical College and men prominent in the medical profession of the city were present. On March 1 Dr. Ridlon held a clinic in the Jefferson Medical College Hospital before a large audience. He performed an operation for congenital dislocation of the hip by the Lorenz method.

Against Tuberculosis.—Dr. Lawrence Flick, head of the Phipps Institute and the White Haven Sanitarium for Consumptives, addressed the Civic Club at the College of Physicians. He urged the necessity for the registration of tuberculosis, and the necessity for disinfection for both the incipient and advanced stages, and said that Philadelphia is the only city of its size in the world which has not entered as a municipality into the efforts of stamping out the disease. He said that Philadelphia was the chosen rostrum from which the world was taught how to combat tuberculosis, but yet the municipal government had never appropriated one penny toward the advancement of the work. The Civic Club has promised to advance the cause of the crusade against consumption by legislation and by advancement of public spirit in its favor.

Personal.—Dr. Charles B. Penrose was unanimously elected a member of the governing body of the Academy of Natural Sciences, to fill the vacancy caused by the resignation of Charles Cramp.——Dr. Max H. Bochroch, chief demonstrator of neurology in the Jefferson Medical College, has been elected chief in the neurological department in St. Joseph's Hospital.

Dr. Edward E. Montgomery held a public clinic at the Philadelphia Hospital, February 27, before a large audience. He performed the Doyen operation of hysterectomy for multiple fibroid tumors of the uterus. This was Professor Montgomery's first appearance before the class since he resigned ten years ago. It was stated in his introduction that he performed the first successful public ovariotomy in Philadelphia in 1879, and the first ovariotomy performed in the Philadelphia Hospital.

Health Report.—Typhoid fever still prevails throughout the city to an alarming extent; 195 new cases have been reported during the week ended March 5. This is the largest number recorded for several years. Every ward of the city, except three, is infected. The source of infection is said to be due to the disturbance of the water supply by the recent freshets. The health authorities have issued bulletins advising that all water be boiled. The figures reported show an increase of 47 over those of last week. The deaths from the disease were 19. The reports of contagious diseases for the week are: Diphtheria, 62 cases, 10 deaths; scarlet fever, 89 cases, 8 deaths; smallpox, 33 cases, 6 deaths; typhoid fever, 195 cases, 19 deaths. The total number of deaths from all causes was 628, a decrease of 65 from those of last week, and an increase of 14 over the corresponding period of last year. Pneumonia heads the list with 116 deaths; consumption caused 64 deaths; heart disease, 50, and Bright's disease, 40.

GENERAL.

Anniversary of First Demonstration of Cystoscope.—The twenty-fifth anniversary of the first demonstration of the cystoscope by Prof. Max Nitze, Berlin, occurred March 9 and was celebrated appropriately by Dr. Nitze's confrères in Berlin. An address was presented, signed by appreciative practitioners in the line of genito-urinary diseases. A cablegram was sent from New York, congratulatory to Professor Nitze, and because of the lateness of notification, the names of those who wish to sign the congratulatory address are to be forwarded to be appended *post festum*. Dr. Ferd. A. Valentine, 31 West 61st Street, New York City, has accepted the invitation of the Berlin committee to forward the names of American pupils and friends which shall be sent to him for that purpose.

CANADA.

Outbreak of Smallpox.—Twenty-three cases of smallpox are reported in Kingsey township, near Sherbrooke, Quebec.

New Hospital Wing.—A new wing has been added to the Charlottetown, P. E. I., hospital, fully equipped for surgical operations, and also for the care of patients with infectious diseases.

Demonstrator of Anatomy at Queen's University.—A special demonstrator in anatomy will be appointed to devote his whole time to the work. He will have the standing of lecturer and will in time be given a professorship.

Jeffrey Hale Hospital, Quebec.—The annual report for the year 1903 shows in the private and public wards 147 surgical, 221 medical, and 135 ophthalmic cases treated; total 503. In the outdoor departments 1,800 patients were treated.

Personal.—Dr. A. D. Blackader, Montreal, has returned from Bermuda, where he spent two months. He is much improved in health.——Dr. George N. Murphy, St. John's, Newfoundland, and his brother, Dr. Charles R. Murphy, Windsor, N. S., have gone to New York for postgraduate work.

Results with Marmorek's Serum in Montreal.—Some time ago Dr. Marmorek's serum was given a trial in the Notre Dame Hospital, Montreal, on one surgical case and on one of tuberculosis of the lungs. The results in the first case were nil, there being noticed neither good nor bad effects. In the lung case the results were bad; the patient received in all nine injections. The sputa were weighed every day during the injections and showed a daily increase up to two ounces on the ninth day. At the beginning of the treatment the patient weighed 118 pounds. After the ninth injection there was a loss of three pounds, and the cough increased and was more harassing. The treatment was then discontinued at the patient's own request.

Dissecting Material in Ontario.—A bill came before the Ontario legislature last week of more than ordinary moment to the medical student body. It was designed to prevent the handing over of the bodies of people who die in houses of refuge to the medical colleges for dissecting purposes. As the law now stands bodies must be claimed by friends within twenty-four hours or else they go to the dissecting table. The promoter of the bill stated that the lives of the inmates were rendered anxious over the disposal of their bodies in case of death, and he wanted the matter left in the hands of the warden of each county and the manager of each institution. The medical men in the legislature opposed the bill on the ground that it would cut off from 40 to 50 per cent. of the dissecting material, and that if the bill became a law, it would be sure to be productive of the former practice of stealing bodies. At present the bill is before a committee.

FOREIGN.

Money to Oxford.—A studentship in pathology in Oxford University, England, is to be established with $6,000 given by Mr. Philip H. Walker.

New Buildings at Cambridge.—A number of new buildings were opened for use at Cambridge University, England, March 1, including the new medical school building.

Official Inspection of the Paris Hospitals.—Nine inspectors have been appointed who are to be delegated to spend ten days each in the Paris hospitals in turn to inspect the working of the establishment and suggest measures for retrenchment of expenses, as well as other points to which attention should be directed.

Sanitary Reforms at Madrid.—The Spanish government has appropriated nearly half a million dollars for reforms at Madrid. The committee entrusted with the task of deciding the measures to be adopted reports in favor of establishing a disinfecting plant, repairing the pavements and improving the water-bringing plant and "East park," and devoting half the sum to the construction of three public school buildings.

Exhibition at International Congress of Ophthalmology.—Prof. A. Siegrist of Berne, Switzerland, has charge of the preparations for the appropriate exhibition of all scientific apparatus, instruments, and the various appliances for instruction, which will be sent to the Tenth International Congress of Ophthalmology, to convene at Lucerne, Sept. 18, 1904. He, therefore, requests all colleagues, as well as all scientific, optical, and mechanical firms who wish to exhibit any objects at the congress to apply to him before July 1, 1904, giving an exact statement of the object to be exhibited, of the space demanded, and of the kind and strength of electric force which may be required. Articles announced later can be accepted only so far as the space at disposal will still allow at that late date.

Health in Word and Picture.—This is the title of a new German ten-cent monthly magazine recently founded at Berlin which proposes to supply the reading public with popularly written articles on scientific medicine. The first number contains articles by Kassowitz of Vienna, on children's diseases, by Pelman of Berne, the psychiatrist, and by Casper of Berlin, the urologist. The title in German is *Gesundheit in Wort und Bild.* The periodical is founded by Drs. Weissbein and Lipliawsky, who already issue the *Russiche med. Rundschau* at Berlin and *Therapia* at St. Petersburg. They have also founded at Berlin a "consulting institute" for Russians. Persons arriving at Berlin wishing to consult physicians but unacquainted with any language but Russian, apply to this institute for information and advice. They are thus saved from falling into the hands of charlatans.

Student Riots in Paris.—The medical students of Paris are making an energetic protest against the proposed abolition of the age limit for university professors, and also against the changing about of professors from one chair to another. They have refused to allow a single professor to lecture since the senate adopted a resolution in favor of abolishing the age limit. After first informing the professor that the manifestation is not against him personally, they proceed to make such a noise, hooting and yelling, that he is unable to proceed. These scenes of violence have been repeated in every amphitheater, and have been followed by several acts of vandalism. Their motto is "Room for the young"; and they proclaim that they do not want driveling old men for their instructors. In regard to the frequent changing of chairs they mention as an instance that Chantemesse, who has been studying serums for ten years, has just been abruptly transferred to the chair of anatomy. This custom of "permutations" is peculiar to France, we understand, and the students consider it a disgrace to science, as no man can be equally eminent in and devoted to more than one specialty at a time. They do not want a teacher whose heart is not in his work.

Homage to Professor Bouchard of Paris.—Nearly the entire number of the *Presse Médicale* of February 24 is devoted to the ceremonies connected with the presentation to Professor Bouchard of a portrait medal. He is regarded as a typical example of all that there is of beautiful, noble, useful and beneficent in the science and art of medicine at the opening of the twentieth century. The manifestation of homage to him thus corresponds, the editor remarks, to one of the most beautiful periods in the history of medicine, and the addresses made are full of interest to all practitioners of medicine at home and abroad. Bouchard has been the representative of France at numerous foreign congresses and delegates from the various countries had assembled with his friends and those who had felt his influence in their professional career. His tact and prudence, his luminous and sound opinion on medical matters and his farsightedness and kindliness were extolled. In the closing words of his acknowledgment of all this homage, he summarized his "medical faith" in the six maxims: "Seek truth. Discover causes. Learn how they disturb life, and how order is re-established. By science and persuasion preserve men. By science, gentleness and firmness combat death and reduce suffering. Guide, encourage and console in a brotherly and tolerant spirit. C'est la Médecine."

Correspondence.

Duration of Life After Fatal Injuries.

MADISON, WIS., March 5, 1904.

To the Editor:—In THE JOURNAL, March 5, a letter by Dr. H. D'Arcy Power of San Francisco brings to mind the following: At the time of our capitol disaster I was early on the scene; one of the first of the injured to be brought out was the foreman. He was immediately removed to a building nearby. On examination, I found his injury a fatal one, the entire calvarium being fractured and cleanly driven through the brain to the base of the skull. Respiration was normal, the respiratory center being uninjured. On endeavoring to raise the fragments respiration ceased, to be immediately resumed when left undisturbed. He lived three hours after receiving his injury.

J. A. MACK.

Eyestrain as a Cause of Headache and Other Nervous Symptoms—A Question of Precedence.

NEW YORK CITY, March 3, 1904.

To the Editor:—In your issues of Jan. 16 and Jan. 23, 1904, Dr. George M. Gould publishes an interesting article concerning the dependence of "Migraine" on eyestrain. In this article he goes extensively into the history of the literature relating to this distressing and extremely common malady.

In this connection he makes the most remarkable statement regarding a contribution of a French oculist to this field. He says (italics are my own):

> In 1888 Dr. G. Martin (*Ann. d'Oc.*), a French oculist, published an article which some time will be recognized as truly epoch-making. But two writers, as far as I have noticed, have even mentioned Martin's magnificent and daring attempt to bring the medical world to its senses.

A compiler should certainly have shown more care than Dr. Gould appears to have shown in reviewing medical literature, before he ignores the work of his own countrymen and gives credit for "epoch-making" to a French author who simply confirmed observations that had been made many times before, and who supported views that had been fought for for years in America by myself and others.

If Dr. Gould had simply taken the trouble to look up medical literature on this subject prior to 1888, he would have found in the *New York Medical Journal* of 1886 an article by myself entitled "The Eye as a Factor in the Causation of Some Nervous Symptoms," and in the *Medical Bulletin* of September, 1887, an article by myself entitled "Eyestrain in Its Relation to Functional Nervous Diseases"; and in the *New York Medical Journal* of April, 1887, an article by myself entitled "Eyestrain in Its Relation to Neurology." Had he looked over the text-books on nervous diseases, he would have found that my large work entitled "Lectures on Nervous Diseases" (F. A. Davis, Phila., 1888), antedated Dr. Martin's article. This work contained the first résumé of eyestrain ever published; as a factor in causing not only migraine, but other equally common nervous symptoms, such as sleeplessness, neuralgias, chorea, epilepsy and insanity. At least one hundred pages in total were devoted by me to the eyestrain directly or indirectly.

From 1880 to 1883 I made my early combats for the eye treatment of headache before the New York Academy of Medicine and the Neurological Society of New York. During the same period of time (which antedates Dr. Martin's article by some years), I also made this subject an important part of the courses of lectures delivered by me each year before the students of the Postgraduate Medical School and Hospital of New York and also before the classes of the University of Vermont. I based these lectures and discussions on my own remarkable restoration to health from a condition of hopeless physical collapse through the detection and correction of latent hypermetropia. This had escaped recognition by means of the ophthalmoscope in the hands of three of the leading ophthalmologists of that period. As careful refractive work was done by me for headaches as early as 1880 as is done to-day.

Again, Dr. Gould can not be unaware of the fact that the prize offered by the Royal Society of Belgium for the best original essay on the treatment of epilepsy was awarded in 1886 to Dr. George T. Stevens of New York for a contribution by him, in which eye treatment alone was employed in that disease, and in which the relationship of eyestrain to headache was mentioned, if my own memory serves me correctly, on several pages. The essay was published in English by D. Appleton & Co. of New York in 1887.

In closing, I would say that I deem it a proper time to raise my voice in earnest protest against the method (too commonly in vogue to-day) of giving undue credit to foreign authors for pioneer work in new fields to the exclusion of Americans, who have sounded the first keynote in many of the great discoveries in medicine. It is not only unpatriotic, but it is unjust to forget or to ignore the early struggles that were made to establish on its present footing the view that "eyestrain is one of the most prolific sources of functional nervous derangements." A. L. RANNEY, M.D.

345 Madison Avenue.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

ALKALINE TREATMENT OF HYPERACIDITY.

A TOLEDO, OHIO, CORRESPONDENT, whose language indicates that he is not a physician, writes with enthusiasm of a physiologic discovery he has made of a self-curative process in his own nature. His method is "simply to excite and swallow a copious flow of saliva, by mechanical compression and self-suction of lips and gums, whenever 'rising of the bile' causes sudden nausea and disposition to vomit; that is, in all cases of 'biliousness' as commonly designated." He is over 60 years of age, and for more than thirty years has been "troubled often with sudden sick spells of rising bile—biliousness—that would last for hours or even days, and would necessitate treatment with alteratives, purges, emetics, etc." "Scarcely a month would pass without one or more of such attacks, until about eighteen or twenty months ago, when this discovery was first made and utilized." Since that time, he says, every attack is dispelled as suddenly as it appears, there are no ill effects and no [other] medicine is required, "no matter how extreme the sudden sickness or how apparently overwhelming the disposition to vomit." Our correspondent's trouble may be hyperacidity of the stomach; he says the "spells come on some time after eating, on an empty stomach, often at night in bed before going to sleep, and sometimes awakening me from sleep." The alkaline treatment of hyperacidity is certainly "physiologic" and "natural," for the alkaline saliva neutralizes the acid secretions of the stomach, but the method is not new. Physicians make use of a dilute solution of bicarbonate of soda—a most efficacious remedy for the symptoms described—but some practitioners suggest the chewing of gum, which increases the flow of the alkaline saliva into the stomach.

THE CHRISTIAN HOSPITAL AGAIN.

HOLLINGER, ALA., March 3, 1904.

To the Editor:—Please inform me about the Christian Hospital membership. Is it any good, or is it only a fake to make money? They have sent me a skeleton certificate with a formidable array of signatures. I would like to have one if it is any good. Eight, ten and twelve dollars are the fees quoted. J. N., M.D.

ANNISTON, ALA., March 4, 1904.

To the Editor:—I enclose some circulars recently received. There may be some gullible enough to be taken in by this kind of an institution. ALLEN A. GREEN.

ANSWER.—We respectfully refer the above and others to THE JOURNAL, May 23, 1903, p. 1443, June 6, 1903, pp. 1587 and 1591, where this scheme was exposed. Evidently these people are "hard at it" again, for every mail is bringing us communications similar to the above, and usually we are favored with the circulars, including those which show the beautiful diplomas that are supplied so cheaply. We note that Dr. John B. Murphy's name is prominent on the diploma, although another name is substituted with a rubber stamp.

MADSTONES.

SNYDER, OKLA., March 1, 1904.

To the Editor:—Will you give some information of the madstone, which so many of the laity believe to be a cure-all for hydrophobia? What is it? M. A. J.

ANSWER.—Madstones are simply porous stones without any special powers excepting those of absorption. Perhaps in some cases they may be like the snake stones of India, as shown by Faraday, and still more recently by Watkins-Pitchford (*Br. Med. Jour.*, Feb. 20), occasionally composed of calcined bone and thus may have a little of the absorbent action of animal charcoal. As the great majority of the persons bitten by so-called mad dogs are not likely to have hydrophobia, they can get up a certain amount of reputation for madstones very easily and the psychic or suggestive action may in some cases be of value in nervous people.

LITERATURE ON HOUSE SEWERAGE.

ALLENTOWN, PA., Feb. 29, 1904.

To the Editor:—I am associated with some friends who are about to ask our city for a franchise to build a house-sewerage system here. Where can I obtain the desired information how to educate the masses through the public press, i. e., what books, writings, etc., are to be had? I. F. H.

ANSWER.—Two of the best books on sewage disposal are "Sewage and Bacterial Purification of Sewage," by Samuel Rideal, John Wiley and Sons, New York, $3.50; and "Sewage Disposal Works," by Santo Crimp, London, C. Griffin & Co., $6.00. Other useful works are "Sewerage," by A. Prescott Folwell, John Wiley and Sons, $3.00, and "Sewage Disposal," by Wynkoop Kiersted, John Wiley and Sons, $1.25. Most of these books have gone through several editions and the latest issued should be obtained.

THE N RAYS A NEW MEANS OF DETERMINING DEATH.

VERA CRUZ, MEXICO, March 2, 1904.

To the Editor:—Do only living bodies emit N rays? In this case shall we not have in that property a new and decisive proof to ascertain the death? CARLOS MANUEL GARCIA.

ANSWER.—Some of the investigators have so asserted. It may be, however, that in the state of "trance," with all functions almost entirely suspended, the production of N rays will also be suspended and the test fail. Those who wish to read about N rays are referred to THE JOURNAL, Jan. 23, 1904, p. 275, abstract 59, and Feb. 6, 1904, p. 404, abstract 14, where articles are referred to. See also foreign abstract No. 34 next week.

PRACTICE IN INDIAN TERRITORY.

CARROLLTON, KY., March 1, 1904.

To the Editor:—Will you let me know through THE JOURNAL the requirements of the laws that govern the practice of medicine in the nations of the Indian Territory? M.D.

ANSWER.—In the Creek nation an authentic diploma or examination is required; in the Cherokee and the Choctaw nations an examination.

THIOSINAMIN FOR REMOVING SCAR TISSUE.

DR. L. F. GULDNER, Davenport, Iowa, asks how much value there is in thiosinamin applied hypodermatically and locally to remove scar tissue, such as the induration remaining after a boil.

ANGLO-AMERICAN MEDICAL ASSOCIATION, BERLIN.

L. A., Atlanta, Ga., writes for the address of the above, and is referred to THE JOURNAL, Jan. 30, p. 320, and Feb. 20, 1904, p. 545.

Marriages.

WILLIAM HERBERT GRANT, M.D., to Miss Edith A. Borchardt, both of Boston, February 22.

JOSEPH H. BOGLE, M.D., Fyffe, Ala., to Miss Eula Whorton, of Centre, Ala., February 25.

GLENN HENLEY, M.D., to Miss Margaret May James, both of Fairmount, Ind., February 26.

DAN HAZEN MOULTON, M.D., to Miss Flora Meister, both of Sacramento, Cal., February 24.

GEORGE S. MURRAY, JR., M.D., to Miss Jennie E. Haight, both of Crescent, N. Y., February 24.

GEORGE A. PAZDRAL, M.D., to Miss Julia Sladek, both of Fayetteville, Texas, February 16.

FRANK A. BATTON, M.D., Clarksville, Ohio, to Miss Otta Smith of Milford, Ohio, February 23.

JAMES WILSON CROFT, M.D., Corning, Ohio, to Miss Mary C. Glick of Columbus, Ohio, February 23.

ELWOOD ROBISON, M.D., Rossville, Ind., to Miss Zella Van Why of Michigantown, Ind., February 17.

FRANCIS SEALS BELCHER, M.D., Mansfield, Ga., to Miss Rena Maude Starr of Starrsville, Ga., February 24.

Deaths.

Ogden Curtis Ludlow, M.D. New York University, 1883, a member of the American Medical Association, and section reporter for several years; a member of the New York State Medical Association; secretary of the New York County Medical Association; a member of the Society of Alumni of St. Luke's Hospital, died March 2 at his home in New York City, from typhoid fever contracted while in attendance on the

meeting of the New York State Medical Society in Albany, last January. The immediate cause of death was hemorrhage from a perforating ulcer. Dr. Ludlow was the New York correspondent of THE JOURNAL, and had filled this position acceptably for a long time. He possessed to an unusual degree the faculty of extracting the pith of articles and discussions.

Jefferson Cushing Gallison, M.D. Boston University, 1875, College of Physicians and Surgeons, Boston, 1888; Tufts College, Boston, 1894; Harvard University Medical School, Boston, 1895; a member of the legislature; demonstrator of anatomy at the College of Physicians and Surgeons from 1889 to 1892; lecturer on surgical pathology at Tufts Medical College, 1893; member of the Massachusetts Medical Society and of the Thurber Medical Society, died from heart disease at his home in Franklin, Mass., February 22, aged 62.

Dallis M. Wick, M.D. Chicago Medical College, 1874, a member of the American Medical Association; second vice-president of the Iowa State Medical Society; member of the Iowa State Association of Railway Surgeons, and the Austin Flint and Blackhawk county medical societies, one of the prominent physicians of northwestern Iowa, died at his home in Cedar Falls, March 1, after an illness of several months, aged 63.

William Rankin, Jr., M.D. College of Physicians and Surgeons, New York, 1871, for many years secretary of the Newark Charitable Eye and Ear Infirmary, a member of the American Ophthalmological Association, the American Otological Association, the Medical Society of New Jersey, and the Essex District Medical Society, died at his home in Newark, N. J., February 25, after an illness of one week, aged 53.

Guy B. Case, M.D. University of Wooster, Cleveland, 1873, a member of the American Medical Association; professor of dermatology and venereal diseases at the Cleveland College of Physicians and Surgeons; one of the prominent physicians of Cleveland, died at his rooms in that city, February 26, from pneumonia, aged 52.

Arthur Collis Gibson, M.D. Medical School of Maine, at Bowdoin College, Brunswick, 1885, member of the Maine Medical Association, and of the Penobscot County Medical Association, died from septicemia, due to an ulcerated tooth, February 21, after an illness of eight days, at his home in Bangor, Maine, aged 43.

David L. Wallace, M.D. Bellevue Hospital Medical College, New York, 1875, a member of the American Medical Association; for many years secretary of the Newark Board of Health, died at his home in Newark, N. J., February 29, from pneumonia, after an illness of four days, aged 48.

William W. Highlands, M.D. Medical College of Ohio, Cincinnati, 1850, the oldest physician in Hamilton County, Ohio, died, February 29, at his home in Newtown, aged 81. He served as surgeon in the Civil War, and in 1883 was a member of the Ohio State Legislature.

Thomas S. Galbraith, M.D. Medical College of Ohio, Cincinnati, 1866, formerly superintendent of the Central Indiana Hospital for the Insane, Indianapolis, and of the Oklahoma Insane Hospital, Norman, died at his home in Seymour, Ind., February 23.

Howard C. Russell, M.D. University of Pennsylvania, Philadelphia, assistant surgeon U. S. P. H. and M. H. Service, stationed at New York, died at the Marine Hospital, Stapleton, Staten Island, from pneumonia, after a short illness, March 2.

John H. Bledsoe, M.D. Memphis (Tenn.) Medical College, 1896, secretary of the Chambers County Medical Society, and a member of the Medical Association of the State of Alabama, died at his home in Lafayette, Ala., January 4, aged 29.

Elbridge G. Hard, M.D. Cleveland Medical College, 1850, surgeon to the First Ohio Light Artillery in the Civil War, died at his home in Medina, Ohio, February 28, from malignant disease of the neck, after a long illness, aged 77.

William F. Buchanan, M.D. University of Pennsylvania, Philadelphia, 1862, assistant medical director in the Civil War, and afterward in the regular establishment until 1867, died at his home in Philadelphia, February 16.

James E. Magee, M.D. Western Pennsylvania Medical College, Pittsburg, 1892, of Seneca, Pa., died recently. The Oil City Medical Club furnished pall-bearers for the funeral and drafted resolutions of regret.

William M. Burgess, M.D. Louisville Medical College, 1882, of El Paso, Texas, was, it is feared, one of the unidentified victims of the Iroquois Theater fire in Chicago, Dec. 30, 1903.

Jacob Allen Hall, M.D. Physio-Medical Institute, Cincinnati, 1870, of Palatka, Fla., died in Indianapolis, March 1, aged 81.

Robert J. Wilding, M.D. Apothecaries' Hall, London, England, 1856, secretary of the Franklin County Medical Society, died suddenly at his home in Malone, N. Y., February 24, from heart disease, aged 67.

Enoch Lewis, M.D. Cleveland Medical College, 1867, died at his home in Oskaloosa, Iowa, March 2, from pneumonia, after a short illness, aged 67. He had been an invalid from paralysis for seven years.

Tobias J. Butler, M.D. Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., 1895, of Chicago, died in January, 1903, from tuberculosis, aged 48.

W. S. Ruby, M.D. Homeopathic Medical College of Missouri, St. Louis, 1878, while despondent from protracted ill health, shot and killed himself at his home in Riverside, Cal., February 22.

Coit H. Kendall, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1878, died at his home in Barrington, Ill., February 21, after an illness of two weeks, from pneumonia, aged 45.

Theophilus Smith, M.D. Jefferson Medical College, Philadelphia, postmaster of Wausau, Wis., from 1868 to 1876, died at his home in Wausau, February 27, after an illness of a week, aged 87.

Frank E. Baker, M.D. College of Physicians and Surgeons, New York, 1882, died at his home in Newark, N. J., March 1, as the result of injuries sustained in a fall, February 8, aged 47.

Theodore Young Kinne, M.D. Albany (N. Y.) Medical College, 1862, assistant surgeon of volunteers in the Civil War died at his home in Paterson, N. J., March 4, from heart disease, aged 65.

Frank M. Severson, M.D. College of Physicians and Surgeons, New York, 1889, died at his home in Seneca Falls, N. Y., March 1, from pneumonia, after an illness of one week, aged 40.

Peter Arnold, M.D. Washington University, St. Louis, 1895, a member of the American Medical Association, died at his home in Wellsville, Mo., February 25, aged 35.

Thomas B. Cosford, M.D. Trinity Medical College, Toronto, 1876, of Lockport, N. Y., died in Redlands, Cal., from consumption, February 26, after a long illness, aged 57.

Hermann Moter, M.D. University of Giessen, Germany, 1847, who retired from active practice in 1891, died at his home in Reading, Pa., February 22, aged 83.

Charles B. Pillsbury, M.D. Hahnemann Medical College, Chicago, 1879, died at his home in Duluth, Minn., March 2, from an abscess of the throat, aged 52.

Abraham Hicks Price, M.D. University of Maryland, Baltimore, 1861, died at his home near Towson, Md., March 1, after an illness of ten years, aged 64.

Orton Woodruff Peterson, M.D. Hahnemann Medical College, Philadelphia, 1859, died at his home in Waterloo, N. Y., February 27, from heart disease.

David B. Hale, M.D. Eclectic Medical Institute, Cincinnati, 1869, died at his home in West Liberty, Ohio, February 26, from epithelioma of the face.

William C. Mills, M.D. McGill University, Montreal, 1893, died suddenly at his home in Chateaugay, N. Y., February 23, from heart disease, aged 38.

J. A. Huntsman, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1875, was found dead at his home in Austin, Nev., February 23, aged 72.

Marcus Henry Slosson, M.D., formerly dean of Pulte Medical College, Cincinnati, died at his home in that city, February 23, from heart disease, aged 85.

Garland Hurt, M.D. St. Louis Medical College, 1863, died at his home in Newport, Ark., Dec. 9, 1903, from pneumonia following influenza, aged 83.

Fred Vernette, M.D. Physio-Medical Institute, Cincinnati, 1865, died from paralysis at his home in Hannibal, Mo., after a long illness, aged 62.

McKendree F. Driscoll, M.D. Starling Medical College, Columbus, Ohio, 1876, died in Chicago from heart disease, January 17, aged 48.

Clinton Toy, M.D. Memphis (Tenn.) Hospital Medical College, 1897, died at his home in Mineral, Texas, from consumption, February 24.

O. Perry Collings, M.D. Tennessee, of Thomas, Okla., died recently in Mexico, where he had gone to spend the winter

Job Bell, **M.D.**, retired, formerly representative from McNairy County, Tenn., died at his home in Henderson, Tenn., February 25.

William **D. McClees, M.D.** University of Pennsylvania, Philadelphia, 1885, died at his home in Wichita, Kan., February 25, aged 42.

James **P. Richardson, M.D.** Columbian University, Washington, D. C., 1868, died at his home in San Francisco, February 9, aged 84.

George **W. Gillette, M.D.** Tufts College Medical School, Boston, 1902, died at his home in Dorchester, Mass., February 21, aged 25.

William **G. Taylor, M.D.** Hahnemann Medical College, Philadelphia, 1870, died at his home in Columbia, Pa., March 4, aged 58.

John **K. Woods, M.D.** Cincinnati College of Medicine and Surgery, 1865, died at his home in Van Wert, Ohio, March 3, aged 77.

Amasa **Ward, M.D.**, died at his home in Hardwick, Vt., from paralysis, after a long period of invalidism, February 20, aged 80.

William **E. Schlemm, M.D.** University of Pennsylvania, Philadelphia, 1854, died at his home in Reading, Pa., February 23, aged 79.

Asa R. **Silvey, M.D.** St. Louis College of Physicians and Surgeons, 1890, died at his home in Murphysboro, Ill., recently, aged 47.

Charles **W. Newton, M.D.** Medical College of Ohio, Cincinnati, 1891, of Toledo, Ohio, died at Phoenix, Ariz., February 2, aged 36.

Anna **E. Mills, M.D.** Denver, 1903, died at her home in Denver, February 21, from tuberculosis of the intestines, after a long illness.

J. **N. Ramsay, M.D.** University of Pennsylvania, Philadelphia, 1859, died at his home in Seaboard, N. C., February 26.

David **Prescott Merritt, M.D.** McGill University, Montreal, 1881, died recently at his home in Elmira, N. Y., aged 63.

Samuel **L. Johnson, M.D.** 1888, died at his home in Pittsburg, Pa., February 21, after an illness of ten days, aged 77.

John **Ashe Mayer, M.D.** Atlanta (Ga.) Medical College, 1856, a retired physician of Scarboro, Ga., died February 23.

Wilson **Reed, M.D.** Hygeio-Therapeutic College of New York, 1861, died recently at his home in Indianapolis.

F. **A. Stevens, M.D.**, of Berwyn, I. T., died from pneumonia at the Gainesville Sanitarium, February 26.

A. **F. Pattison, M.D.**, died at his home in Plattsburgh, N. Y., March 3, aged 76.

Book Notices.

BIOGRAPHIC CLINICS. Volume II. The Origin of the Ill Health of George Eliot, George Henry Lewes, Wagner, Parkman, Jane Welch Carlyle, Spencer, Whittier, Margaret Fuller Ossoli and Nietzsche. By George M. Gould, M.D., Editor of American Medicine. Cloth. Pp. 392. Price, $1.00. Philadelphia: P. Blakiston's Son & Co. 1904.

In a previous volume Dr. Gould attempted to convince the medical world—but, as he himself admits, with slight success—that the ill health of De Quincey, Carlyle, Darwin, Huxley and Browning was mainly due to defective eyes. In the present volume a similar line of argument is pursued, but we fear the same jury will also render a Scotch verdict in the case of the fourteen personages under discussion. Postmortem diagnosis is the most valuable of all single methods with a complete *sectio corporis* in evidence, but notoriously misleading, and, may we not add, unscientific when it is based, as in these instances, on quotations from diaries, biographical sketches, incomplete medical reports and occasional letters. It is like diagnosticating and prescribing through the medium of the postoffice or telephone; most of us shrink from it, especially when we have never seen the patient. Naturally, then, we hesitate to agree with Dr. Gould, in whose mind, nevertheless, there seems no shadow of doubt. The fourteen exhibited eyestrain, and should have been treated for it (with glasses), after which their sufferings would have disappeared like mist before the rising sun. In all candor, we believe the author would have roundly denounced any German or any Englishman who might have had the temerity and the misfortune to make such an unscientific use of his imagination.

From our reading of Dr. Gould's book we would be content to say that all of the fourteen presented some symptom or symptoms referable to the ocular apparatus, and that a moiety of them—perhaps eight—might have been helped by treatment of their eyes or they might not. We do not know what the exact defect was in any of these cases, as there was no report published of a proper examination having been made of their eyes, and we can not, therefore, speak with any authority or any real satisfaction. Not so with Dr. Gould. *Ladet Alles in ein Schiff*—they were all, he is convinced, ametropic or heterophoric, or both, and what they needed was just one oculist.

In the case of Parkman, if we were to hazard a guess, we would suggest that his ocular disease was a neurasthenic asthenopia not dependent on ametropia, and not curable by lenses alone. Of course, this guess is of little or no value, but it strikes us as being quite as free from objection as Dr. Gould's guess.

We are, however, less concerned with the assertion that certain illustrious workers in the various departments of intellectual endeavor have suffered with "eyestrain" than with the arraignment of the medical profession, the motif that runs through all the chapters of the book, for its alleged neglect of this "morbid factor" in the production of disease. The prefatory matter in Dr. Gould's book is largely composed of denunciations of his confrères for their astounding ignorance and prejudice in this regard. Evidently speaking as an *amicus curiæ* in this particular, he tells us that (page vi) "the profession must be made to realize the enormity of the mistake it has made in ignoring the truth for the past thirty years. It is more than strange that this professional crime—for such it is—should be most grievous precisely in those medical specialists from whom one would naturally expect the speediest and frankest acceptance. I allude to the neurologists and ophthalmologists. From the former class no word of consent or consideration has reached me, and from the oculists I know of but few who have assented even with qualification." The position occupied by the author in the literary world and his standing as a physician demand that we should at least examine this new doctrine and decide whether we have, unwittingly or not, been guilty of the sins laid at our professional door.

At the outset it is to be noted that several of these fourteen victims of ill health suffered from *migraine*, that this disorder was certainly the chief cause of their disability, and that Dr. Gould regards this form of "sick headache" as essentially of ocular origin. "A few drops of a mydriatic in the eyes will cure it—temporarily, of course, and non-use of the eyes will prevent it; a wrong pair of glasses will cause it and right ones will cure it. Thousands have been cured by the right ones. . . . This mystery and opprobrium of medicine can easily be cleared up whenever any 'scientist' may wish." "Each day of sixteen years and many thousands of patients have convinced me that eyestrain is the almost sole cause of the awful disease sick headache." Dr. Gould may easily understand why the enthusiasm of the neurologist and the ophthalmologist is stilled as he reads these sentences. If there is one fact that has hitherto appeared easy of demonstration in the conduct of cases of migraine it is that the ocular element in them is generally small and that the correction of the ametropia and heterophoria present exerts but a feeble influence on the attacks, and that a complete cure is the exception (perhaps not in 10 per cent. of the cases) by any form of ophthalmic therapeusis. Moreover, almost every neurophthalmologist regards the immediate eye symptoms—phosphenes, scintillating or fortification-scotomata cloudiness of vision, hemiopia, aching of the eyes, etc., as only incidentally related to the visual apparatus.

The distinguished author would also have us believe that quite a respectable percentage of the "night terrors," "bad dreams," and restless sleeping in children are due to eyestrain, and that serious and repeated subconjunctival hemorrhages,

biliousness, indigestion, nervousness, insomnia, constipation, irritability and other disorders have been directly induced by the ametropic eyes of the adult, but he refrains from telling us what proportion of these troublesome symptoms are of ocular origin. In his opinion, also, cancer, rheumatism, influenza, coryza, partial paralyses of the hands and arms, erysipelas, pneumonia, tuberculosis and even suicide may result, at least indirectly, from the disturbing influences of this morbific agent. If his contentions are well grounded, we readily admit that Dr. Gould has reason to sound as loudly as possible the eyestrain tocsin if his brethren in the fight are to be sufficiently aroused against this hydra-headed monster!

The author, while giving a foremost place to eyestrain in the causation of these symptoms, has little or nothing to say about the production of asthenopia by extraocular agents. Surely the organ of sight is sometimes functionally disturbed by, for example, metabolic disorders, nervous diseases and affections of the neighboring cavities. Are we not to be on the lookout lest we prescribe glasses or oculomuscular gymnastics for the relief of eye symptoms that flow from vices of the digestive, nervous or upper respiratory tract? What about the various infections of the lids and globe, the hyperemia, the chronic conjunctivitis, the blepharitis and the other infections of the anterior segment of the globe? Do they not produce much discomfort when the eye attempts to functionate, and are they not worthy of consideration?

The assumption that the evil results of eyestrain are not well understood by the profession is, in our opinion, entirely unwarranted. Why should we be accused of shutting our eyes to the iteration and reiteration of the main facts of ametropic and heterophoric viciousness that diligent and energetic ophthalmologists have paraded before graduates and undergraduates for the past twenty years, not only in this country, but (Dr. Gould to the contrary notwithstanding) in England and the Continent also? Innumerable articles in medical journals, papers before medical societies uncountable, reprints sent broadcast by the thousand, chapters in all the text-books—what more can Dr. Gould ask? Without prolonging this argument unduly, let us quote from a very elementary text-book for students—the nearest to hand. The statement first made is that the *commonest* symptoms induced by ametropic eyes in their attempts to see normally are "headaches, ocular pains and a sense of fatigue." The manual then adds, as less frequent sequels, "frontal or occipital 'neuralgia,' vertigo, insomnia, nervousness, spots or specks in front of the eyes (muscæ), car sickness, nausea, burning in the eyes or lids, smarting, 'drawing' and foreign body sensations, lachrymation and 'hot eye,' not to mention actual organic alterations in the ocular tissues (ametropic choroiditis, cataract, granular lids, conjunctival hyperemia, styes and blepharitis), due to the chronic vascular changes set up by long-continued efforts on the part of the muscular apparatus to bring about normal vision. *Occasionally* this constant irritation of the central system is responsible for attacks of chorea, epilepsy, migraine, neurasthenia, 'nervous' indigestion, 'biliousness,' and other disorders of the sympathetic system—symptoms that disappear when proper glasses are worn." If we add the blurring of print and mixing of letters and lines in reading, it seems a fair statement of the truth about the matter—doctrine that has been steadily, persistently and uniformly preached in medical journals any day these twenty years. To this array we do not believe that Dr. Gould has added anything new.

There are few propositions in the appended sixty-eight reasons "why glasses did not fit" that most ophthalmologists are not perfectly familiar with, or that they will call in question, except, perhaps, a few statements like this: "No optician ever prescribed a scientifically correct pair of lenses." We are no more in favor of the "oculist-optician" than we are of the druggist who prescribes over the counter, yet we would hesitate to make the assertion that neither had *ever* guessed correctly—because it would not be true.

Again, in his comments on "reasons" 5 to 14, and elsewhere, Dr. Gould insinuates that competent, alert and well-trained ophthalmic surgeons are so rare and the accurate determination of the refractive condition of patients so unusual that a long-suffering public must continue to suffer until his particular methods are more widely adopted. In our slight experience, we have come to a different conclusion, and we shall believe that the average American ophthalmologist is as painstaking, as judicious, as experienced and as successful in his dealings with ametropic and heterophoric patients as are the practitioners of any other branch of medicine.

One more word relative to the comment on "reason number 9." The author says: "The work [of the refractionist] demands too severe and continuous absorption of energy to permit of other interests. Science is too extensive in any one branch, and especially in this one, for the 'universal specialist.' Mastery is not attainable in more than one department. Good refraction prevents the ocular surgical diseases, and it will largely do away with the ophthalmic surgeon." If Dr. Gould had not, under "reason 1," already told us that "the 'eyestrain crank' of to-day not only does not ride his hobby hard, but does not ride it nearly hard enough," we would have reminded him that the chief danger to the specialist is the narrowing effect of his specialty. He is prone to think that *his* microcosmos rounds the whole world of medical science, and he is apt, if all his interest lies in one little corner of that world, to believe it to be the pivot on which the whole universe swings. Already the profession, as well as the laity, are beginning to look askance at the wonderful claims of some pent-up specialties. Let us expand and not contract.

Although the truth, as we see it, does not permit us to agree with Dr. Gould's estimate of the enormous evils of eyestrain, we most willingly and cordially pay him tribute justly his due for the amazing industry he has displayed in gathering the materials for "Biographic Clinics," and for the adroit use of a most eloquent pen. The personal history of his fourteen patients furnishes exceedingly interesting reading. We trust that if there is to be a third volume he will give us more biography and less eyestrain.

FUNCTIONAL DIAGNOSIS OF KIDNEY DISEASE. With Especial Reference to Renal Surgery. Clinical Experimental Investigations. By Dr. Leopold Casper (Privatdocent an der Universität) and Dr. Paul Friederich Richter (Assistant der III Med. Klinik in Berlin). Translated by Dr. Robert C. Bryan, Adjunct Professor Genito-Urinary Diseases, University Medical College, Richmond, Va., and Dr. Henry L. Sanford, Resident Surgeon Lakeside Hospital, Cleveland. Cloth. Pp. 233. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

This is an excellent little work on the newer methods of determining the functional activity of the kidneys. In all diseases of the kidneys affecting one or both organs, in which surgical methods are under discussion, the necessity of examining the urines obtained directly from each kidney separately is very forcibly and properly emphasized. The attempt, however, to show that no methods of examining the urine are of any value save cryoscopy, and the quantitative estimation of sugar eliminated during a phloridzin-glycosuria, is anything but convincing. That both of the methods mentioned are of great value is true, but that they are the only methods of any value is just as certainly not true, and this can easily be demonstrated by an analysis of the very cases reported to show the contrary. The translators have followed the text closely, at times even to the extent of awkwardness of expression. The work is of great value to all who are doing advanced kidney surgery.

Miscellany.

Objectionable Advertisements in the Lay Press.—A few clear-headed and high-minded managing editors in eastern cities have taken the step of excluding objectionable advertisements, but the example has not seemed to be pleasing to the great majority of their fellows. In justice it must be said, however, that many of the sinners are such through sheer, though inexcusable, ignorance. No one about a newspaper office knows anything about medical matters, and the harm done by such advertisements is not realized.—*Cleveland Medical Journal.* Here is more work for the public press committee of the county medical society.

The Pure Food Bill.

This bill, which is now before the senate, and which has passed the house, provides for the change of the Bureau of Chemistry in the Department of Agriculture into the Bureau of Chemistry and Foods, and its enlargement to meet the needs of the law as hereby enacted. It provides that the shipment or introduction of any article of food or drugs which is adulterated or misbranded into any state or territory from another or from any foreign country is to be prohibited. If anyone shall sell or offer for sale such product he shall be guilty of a misdemeanor and fined not exceeding $200 for the first offense, and not exceeding $300 for every subsequent one or be imprisoned not exceeding one year, or both, at the discretion of the court.

No article shall be considered adulterated or misbranded when packed or prepared for export to any foreign country according to the directions of the foreign purchaser when such packing or preparation is not in conflict with the laws of the foreign country to which it is shipped, but if it is sold or offered for sale for domestic use or consumption it shall not be exempt from the operation of all the other provisions of the act.

The director of the Bureau of Chemistry and Foods shall make such examination as may be required of the specimens of foods and drugs under the regulation of the Commissioner of Agriculture, and it shall be the duty of every district attorney to whom the Secretary of Agriculture shall report any violation of this act to cause proceedings to be commenced and prosecuted without delay for the fines and penalties provided.

Definitions of adulterations, misbranded and of the terms drugs and foods are given in detail. The exceptions are that an article of food which does not contain any added poisonous or deleterious ingredients shall not be deemed to be adulterated in the case of mixtures or compounds now or from time to time hereafter known as articles of food under their own distinctive names and not specially included under definition 4 of this section; that is, if it be not an imitation of or offered for sale under the distinctive name of another article. 2. In case of articles labeled, branded, or tagged so as to plainly indicate that they are mixtures, compounds, combinations, imitations or blends provided the labels show the character and constituents thereof, and nothing shall be construed as requiring proprietors or manufacturers of proprietary foods which contain no unwholesome ingredient to disclose their trade formulas except in so far as it may be necessary to secure freedom from adulteration or imitation, and provided further that no dealer should be convicted under the provisions of this act when he is able to prove a written guarantee of purity, in a form approved by the Secretary of Agriculture, signed by the manufacturer or party or parties from whom he purchased such article; provided also that said guarantor or guarantors reside in the United States. Such guaranty shall contain the full name and address of the party or parties making the sale, and they shall be amenable to the prosecutions, fines and other penalties which would attach in due course to the dealer under the provisions of this act. When in the preparation of food products for shipment they are preserved by an external application applied in such a way that it is necessarily removed before use, the provisions of this act shall be construed as applying only when such products are ready for consumption. The Secretary of Agriculture is directed to fix the standard of food products when advisable, and every manufacturer or seller must be able to furnish within business hours and on tender and full payment of the selling price a sample of such drugs or article of food to any person duly authorized by the Secretary of Agriculture to receive the same. Any manufacturer, producer or dealer who refuses to do this shall be guilty of a misdemeanor, and on conviction shall be fined not exceeding $100, or be subject to imprisonment not exceeding 100 days, or both. Any one convicted is also liable to have to pay the costs and expenses of analysis, etc., beside the penalty imposed.

This act does not interfere with commerce wholly internal in any state nor with the exercise of police powers of any state, but foods and drugs fully complying with all the provisions of the act shall not be interfered with by the authorities of the several states when transferred from one state to another as long as they remain in the original unbroken package, except as may be otherwise provided by the statutes of the United States. Proceedings in case of any violation can be held in any district court in the United States. The proceedings in such a libel case shall conform as near as may be to the proceedings in admiralty except that either party may demand trial by jury in any issue of fact and all such proceedings shall be at the suit of and in the name of the United States. The Secretary of Agriculture is authorized to investigate the character and extent of the adulteration of foods, drugs and liquors whenever he has reason to believe that articles are being imported from foreign countries which by reason of such adulteration are dangerous to the health of the people of the United States, or of kinds which are forbidden entry into or forbidden to be sold or restricted in sale in the countries in which they are made or from which they are exported or which shall be falsely labeled in any respect. The Secretary of the Treasury is authorized to open such original packages and deliver specimens to the Secretary of Agriculture for the purpose of examination, giving due notice to the owner or consignee of such articles, who may be present and have the right to introduce testimony. The Secretary of the Treasury shall refuse delivery to the consignee of any such goods which the Secretary of Agriculture reports to him have been inspected and analyzed and found to be dangerous to health, or of kinds which are forbidden entry into or forbidden to be sold or restricted in sale in the countries in which they are made or from which they are exported or which shall be falsely labeled in any respect either by omission of the name of any added ingredient or otherwise or in regard to the place of manufacture or the contents of the package. This act is to be in force from Sept. 1, 1904.

The Loss of Life in 1903.

Statistics gathered during the year 1903 show that the loss of life in the United States from various violent causes was as follows:

RAILROAD DISASTERS.

The loss of life by railroad accidents during 1903 was 4,090, as compared with 3,165 in 1902, 3,699 in 1901, and 1,409 in 1900. In addition to the loss of life on the steam roads 573 have been killed on electric roads.

MARINE DISASTERS.

In wrecks at sea and on inland rivers and lakes, the total loss of life was 1,935, as compared with 4,200 in 1902, and 2,255 in 1901.

OTHER ACCIDENTS.

The following table gives the loss of life resulting from other disasters of various kinds:

Fires	1,792	Electricity	156
Drowning	2,471	Mines	788
Explosions	736	Cyclones, storms	487
Falling buildings, etc.	474	Lightning	139

Some disasters which caused the largest loss of life were: Cyclones and rock slides in April, 127 persons; cyclones and the Missouri River floods in May, 266; a cyclone at Gainsville, Ga., in June, 80; a South Carolina flood in June, 58; a cloud-burst in Arizona in June, 31; a cloud-burst in Heppner, Oregon, in June, 200; and finally December 30 about 576 lives were lost in the burning of the Iroquois Theater, Chicago.

MURDERS.

During the year there were 8,976 crimes resulting in death by various forms of violence. In 1902 there were 8,834, and in 1901, 7,852. The number killed by burglars, thieves, etc., was 406, while in 1902 it was 333, and in 1901, 193. During 1903 only 53 highwaymen were killed. The causes of these crimes were as follows:

Quarrels	4,952	Resisting arrest	78
Unknown	2,451	Highwaymen killed	53
Liquor	302	Riots	38
Jealousy	228	Self defense	21
By highwaymen	406	Strikes	35
Insanity	140	Outrages	12
Infanticide	254		

In contrast to the 8,976 cases of murder and homicide are the few legal executions, which numbered 123. In 1902 there

were 144, in 1901, 118, and in 1900, 119. In Alabama, Missouri and New York there were 11 executions each, in Virginia 10, in Georgia 9, in Mississippi and Pennsylvania 8, and lesser numbers in other states.

LYNCHINGS.

In 1903, 104 persons were lynched, while in 1902 there were 96, in 1901, 135; in 1900, 115, etc. The number has gradually decreased, in 1885 lynchings numbered 184; in 1892, 235. In 1903 18 persons were lynched in Mississippi, 14 in Louisiana, 13 in Arkansas, 12 in Georgia, etc. Illinois and Montana each had 3, the largest number of any northern state. Of the total number of lynchings 12 occurred in the north and 92 in the south, 86 were negroes, 17 were white persons, and 1 a Chinaman; 2 were women. The alleged crimes were as follows:

Murder, 47; criminal assault, 11; attempted criminal assault, 10; murderous assault, 7; unknown offenses, 5; race prejudice, 5; complicity in murder, 5; arson, 4; suspicion of murder, 3; mistaken identity, 3; insults to whites, 2; making threats, 1; refusing to give information, 1.

SUICIDE.

Suicides during 1903 numbered 8,597, as compared with 8,291 in 1902, 7,245 in 1901, 6,755 in 1900, and 5,340 in 1899. Carbolic acid was the most common poison used and poisoning the most common method. This calls attention to the ease with which carbolic acid may be procured and gives emphasis to the agitation for the lessening of this possibility. Altogether 4,050 persons took poison, 3,627 killed themselves by shooting, 370 by hanging, 185 by railroad trains, 54 by jumping from windows and roofs, 15 by fire, 18 by stabbing, 7 by dynamite and 4 by starving. Of the 8,597 cases of suicide in 1903, 5,385 were men and 3,212 women. Among professional men, physicians headed the list, numbering 35, ministers 5, lawyers 4, artists 4, college professors 2, bank officials 12. The causes of suicide were as follows:

Despondency	4,561	Domestic infelicity	628
Unknown	1,454	Liquor	519
Insanity	401	Disappointed love	299
Ill health	384	Business losses	351

These facts concerning the violent causes of death are full of meaning, but the deductions to be made are not essentially different from those of previous years. The physician would be glad to see statistics of epidemics of disease, but these are stated to be not ascertainable with exactness. The above statistics are gathered from various sources. We add the statistics we gathered and published (THE JOURNAL, Aug. 29, 1903) of the number killed in Fourth of July casualties: By tetanus, 406; by other injuries, 60; total, 466.

State Boards of Registration.

COMING EXAMINATIONS.

Maine Board of Registration of Medicine, Portland, March 23. Secretary, A. K. P. Meserve, M.D., Portland.

Regular Board of Medical Examiners for Georgia, Atlanta, March 30. Secretary, I. H. Goss, M.D., Athens.

Arizona Board of Medical Examiners, Phoenix, April 4. Secretary, Wm. Duffield, M.D., Phoenix.

Utah State Board of Medical Examiners, Salt Lake City, April 4. Secretary, R. W. Fisher, M.D., Salt Lake City.

Board of Medical Examiners of Montana, Helena, April 5. Secretary, Wm. C. Riddell, M.D., Helena.

North Dakota State Board of Medical Examiners, Grand Forks, April 5. Secretary, H. M. Wheeler, M.D., Grand Forks.

Board of Medical Examiners of the State of California, City Hall, San Francisco, April 5. Secretary, Geo. G. Gere, San Francisco.

Idaho State Board of Medical Examiners, Boise, April 6. Secretary, R. L. Nourse, M.D., Hailey.

Minnesota State Board of Medical Examiners, State Capitol Building, St. Paul, April 5-7. Secretary, C. J. Ringnell, M.D., Minneapolis.

Illinois State Board of Health, Chicago, April 6-8; April 25-27, and East St. Louis, May 4-6. Secretary, J. A. Egan, Springfield.

Rhode Island State Board of Health, State House, Providence, April 7-8. Secretary, Gardner T. Swarts, M.D., Providence.

State Medical Board of the Arkansas Medical Society, Little Rock, April 12. Secretary, J. P. Runyan, M.D., Little Rock.

Missouri State Board of Health, Kansas City, April 12-14. Secretary, W. F. Morrow, M.D., Kansas City.

West Virginia State Board of Health, Clarksburg, April 12-14. Secretary, Hugh A. Barbee, M.D., Point Pleasant.

Vermont State Board of Medical Censors, Y. M. C. A. Building, Rutland, April 13-14. Secretary, S. W. Hammond, M.D., Rutland.

Board of Medical Supervisors of the District of Columbia, Washington, April 14. Secretary, Wm. C. Woodward, M.D.

Board of Medical Examiners for the State of Texas, Austin, April 21-23. Secretary, M. M. Smith, M.D., Austin.

Iowa January Report.—Dr. J. F. Kennedy, secretary of the Iowa State Board of Medical Examiners, reports the written examination, held at Des Moines, Jan. 26 and 27, 1904, as follows: Subjects, 8; questions, 80; percentage required, 75; applicants, 20; passed, 12; failed, 8.

PASSED.

College.	Year Grad.	Per Cent.
Western Reserve University, Ohio	(1885)	81
Rush Med. Coll., Chicago. (1900) 80, (1901) 87, (1902) 86, (1903) 86, 82.		86, 86
University of Michigan	(1902)	92
St. Louis Medical College	(1899)	84
St. Louis College P. and S.	(1903)	77
College P. and S., Chicago	(1903)	87
University of Christiania, Norway	(1898)	84

FAILED.

St. Louis College P. and S.	(1901)	74
Ainsworth Med. Coll., St. Joe	(1903)	67
Marion-Sims Med. Coll., St. Louis	(1898)	71
University of Nebraska, Omaha	(1903)	74
Barnes Medical College, St. Louis	(1900)	66
University Medical College, Kansas City	(1902)	69*
Eclectic Medical Institute, Cincinnati	(1903)	66‡
Chicago Hom. Med. Coll.	(1903)	60*

* Second examination; ‡ third examination.

Wisconsin January Report.—Dr. Filip A. Forsbeck, secretary of the Wisconsin Board of Medical Examiners, reports that at the written examination at Milwaukee, January 12, at which 120 questions were asked on 18 subjects, and a percentage of 75 was required, 7 applicants appeared, 5 passing, 1 failing, and 1 being conditioned. There were also 3 osteopaths, 2 failing, and one being conditioned.

PASSED.

College.	Year Grad.	Per Cent.
Northwestern University	(1902) 80.3, (1899)	87.5
Keokuk (Iowa) Medical College	(1903)	80.3
Rush Medical College, Chicago	(1902)	83.4
McGill University	(1891)	87.4

CONDITIONED.

University Medical College	(1901)	76‡

FAILED.

Harvey Medical College, Chicago	(1899)	70.4

Association News.

WORK OF MEDICAL LEGISLATION COMMITTEE.

The Panama Canal Commission and the Medical Profession.

Many of our readers are aware of the work done by the Committee on Medical Legislation of the American Medical Association to secure the appointment of a medical member on the Panama Canal Commission. The committee sent out a "referendum," February 24, but, as it developed later, too late to be of service. The committee, March 4, sent out a circular letter referring to the matter, which is as follows:

COMMITTEE ON MEDICAL LEGISLATION.

OFFICE OF THE CHAIRMAN: CINCINNATI, March 3, 1904.

To the National Auxiliary Congressional and Legislative Committee:—The Committee on Legislation begs leave to report, relative to General Referendum No. 1, that at the time of the meeting of the National Legislative Council at Washington, information was received that appointments on the Panama Canal Commission would not, in any probability, be closed until after March 1. The President was accordingly addressed and a referendum issued February 24. The appointments were, however, promulgated the next morning—too soon for the referendum to have become effective, even if the appointments had not been previously agreed on. That the latter was, however, the case is shown by the letter of the President, as follows:

WHITE HOUSE, WASHINGTON, Feb. 27, 1904.

Dr. Charles A. L. Reed, American Medical Association, Cincinnati:

The President directs me to state that before receiving your letter of the 24th the commission had been made up. The President had already given the fullest and most careful consideration to the proposal to put a medical member on the commission, and would have been delighted to have met a delegation from your body if the application had been made in time, exactly as he did meet Dr. Osler, Dr. Welch and others, who came before him on this same subject. Of course it was not possible for him to make arrangements to meet such a delegation after the commission had actually

been appointed. The President assures you that he is in hearty sympathy with the purposes of your Association, and believes that the commission as appointed will conduct its business in a way which will satisfy the medical experts of this country.

Very truly yours, (Signed) WM. LOEB,
Secretary to the President

The foregoing letter, so far as the attitude of the President is concerned, must be accepted as entirely satisfactory. The fact remains, however, that the Panama Canal Commission, in its composition, violates the principle that the medical profession must recognize as vital to its own proper status in the community, viz.: Just representation on any and every commission of mixed membership dealing in a large way with the application of medical science to the general welfare. The present circumstance, however, is to be charged to the congress which, by the terms of the law, left but a single appointment in the seven to the entire discretion of the President. It has been deemed best to recognize the situation simply as another example of the forgetfulness of legislative bodies relative to the civic relations and political importance of the medical profession, and to await the organization of the commission and the promulgation of rules governing medical and sanitary administration, before determining whether or not an amendment to the law, making a commission of nine instead of seven members, two of them physicians, ought to be made the subject of a referendum. . . .

CHARLES A. L. REED, Chairman.

Philadelphia Clinics in June.

The medical colleges and hospitals of Philadelphia are preparing a series of clinics and demonstrations complimentary to the members of the American Medical Association. These clinics will be given the week preceding and the week following the Atlantic City session.

New Members.

New members for the month of February, 1904:

ALABAMA.

Fore, Rufus B., Horse Creek.
Thompson, H. W., Plantersville.
Baldwin, Jas. C., James.
Johnston, F. M., Tuskegee.

ARIZONA.

Thayer, L. H., Buckeye.
Cooper, A. Nassau, Bisbee.

ARKANSAS.

Blackwood, J. C., Mt. Judea.
McClendon, A. A., Marianna.
McClendon, J. W., Hot Springs.
Newton, W. L., Oualaska.

CALIFORNIA.

Gray, Frank P., San Francisco.
Himmelsbach, Wm., San Francisco.
Ryer, M. B., San Francisco.
Vecki, V. G., San Francisco.
Reinhardt, G. F., Berkeley.
Teass, Chester J., Winthrop.
Miller, Chas. F., Gardena.
Janes, John E., Pasadena.
Holden, Jos. M., Long Beach.
Wallace, R. F., Redding.
Rankin, John T., Los Angeles.

COLORADO.

Scully, D. J., Colorado Springs.
Cooper, J. E., Boulder.
Taylor, A. G., Grand Junction.

CONNECTICUT.

Lawton, F. L., Hartford.
Fitzgerald, Wm. H., Hartford.
Bell, Geo. N., Hartford.
Allen, L. M., So. Norwich.
de Lissor, G. M., Bridgeport.
Simpson, F. T., Hartford.

DISTRICT OF COLUMBIA.

Abbe, Freeman, Washington.

FLORIDA.

Mitchell, Wallace, Jacksonville.
Ives, A. Cronin, Lake City.
McKinley, Jr., Jas. F., Gainesville.

ILLINOIS.

Storey, C. A., Chicago.
Almes, H. E., Chicago.
Hook, Elisha I., Chicago.
Schmaltz, Georg, Chicago.
Maginn, E. F., Chicago.
Knight, C. C., Chicago.
Durham, O. B., Chicago.
Moldenhauer, G. H., Chicago.
Blanchard, Wallace, Chicago.
Bergener, Gustav J., Chicago.
Meyer, R. C. J., Moline.
Ryerson, C. D., West York.
Seigfreid, H. D., Denver.
Nelson, G. T., Morris.

INDIANA.

Smith, S. E., Richmond.
Van Buskirk, E. M., Ft. Wayne.
Weist, H. H., Richmond.
Herr, Henry, Washington.
Mitchell, J. M., Lafayette.

IOWA.

Graham, D. Y., Morning Sun.
Hunter, Fred, Emmettsburg.
Wilson, Frank R., New London.
Newell, W. C., Ottumwa.
Sloat, Wm. E., Denmark.
Turner, L. C. S., Colfax.

KANSAS.

Wehe, W. A., Topeka.

KENTUCKY.

Wolfe, D. H. H., Louisville.
Owens, James H., Wisdom.
Chatten, Edw. A., Earlington.
Crume, S. B., Bloomfield.
Venable, C. L., Prices Mill.
Heavrin, J. P., Owensboro.
Crockett, E. K., Wilmore.
Wise, W. P., Frozen Creek.
Carpenter, B. R., Hustonville.
Bailey, Sanford, Valley View.

LOUISIANA.

Tircuit, P. C., Outre.
Kemp, Robt. C., Echo.
Rogers, Fulton, Napoleonville.
Himel, A. J., Napoleonville.
Regard, Emil, Mansura.

MARYLAND.

Dobbin, Geo. W., Baltimore.
Schild, Edw. H., Baltimore.
Hoffmann, Robt., Baltimore.

MASSACHUSETTS.

Holmes, Edgar M., Boston.
Smith, Mary A., Boston.
Canedy, C. F., Greenfield.
Clarke, I. J., Haverhill.
Bates, Chas., So. Royalston.
Thorning, W. Burton, Winchester.
Parmelee, Wm. J., Worthington.
Lindquist, C. A., Everett.
Young, E. W., Everett.
Sumner, H. H., Lowell
Morris, R. H., Everett.
Robinson, Francis A., Pittsfield.
Wheeler, E. R., Spencer.
Eastman, Alex. C., So. Framingham.
Lynch, P. M., Springfield.
Chapin, Delia L., Springfield.
Holton, C. E., Bernardston.
Macleod, Arthur, Gloucester.
Merritt, V. S., Haydenville.
McPherson, W. E., Somerville.

MICHIGAN.

Morse, R. L., Ann Arbor.
Willis, E. A., Ann Arbor.
Otis, E. F., Battle Creek.
Buckley, Thos. M., Battle Creek.
Townsend, I. S., Detroit.
McKean, G. E., Detroit.
Williams, Norris A., Bangor.
Steinbach, R. H., Richville.
Carter, J. R. C., Rudyard.
Darling, Abner M., Crystal Falls.
Wall, W. Joselyn, Elba.
Ketcham, Wm. J., Dowagiac.
Long, Harry W., Escanaba.
Shaver, Harry E., Boyne City.

MINNESOTA.

Nelson, C. P., Westbrook.
Quitmeyer, O. C., Parkers Prairie.

MISSISSIPPI.

Crawford, Wm. S., Laurel.
Elmore, R. C., Durant.
McCormick, H. G., Jones City.

MISSOURI.

Brown, John Y., St. Louis.
Barnes, Jr., A. S., St. Louis.
Henry, Fannie J., Kansas City.
Welch, John Albert, Farber.
Spriggs, M. Luther, Joplin.

NEBRASKA.

Warta, Jos. J., Sargent.
Hildebrand, G. H., Clearwater.
Waite, H. H., Lincoln.
Robinson, O. E., Danbury.

NEW HAMPSHIRE.

Stewartson, Charlotte D., Manchester.
Davenport, G. E., Lisbon.

NEW JERSEY.

Norton, H. G., Trenton.
Elwell, Alf. M., Camden.
Neal, C. B., Millville.
Proctor, Jas. W., Englewood.
Pratt, Wm. Henry, Camden.
Priestley, Sophie, Camden.

NEW YORK.

Robertson, Jos. A., New York City.
Witmer, A. F., New York City.
Goodridge, E. A., Flushing.
Sitler, W. R., Suffern.
Goodwin, P. S., Perry.
Torrey, Edw., Allegany.
Flagg, J. D., Buffalo.
Allan, C. F., Newburgh.

NORTH CAROLINA.

Archey, L. M., Concord.
Councill, J. B., Salisbury.
Hill, D. J., Lexington.
Stanton, D. A., High Point.
Fowlkes, J. L., Hamlet.
Pressly, C. Wm., Charlotte.

OHIO.

Rankin, Jr., G. T., Akron.
Baron, F. S., Zanesville.
Cragg, H. C., Cincinnati.
Muhlberg, Wm., Cincinnati.
Ormsby, H. B., Cleveland.
Jones, N. M., Cleveland.
Stern, W. G., Cleveland.
Calhoun, F. P., Canton.
Folk, Peter, Deavertown.
Edwards, Edw., Delphos.
Shaw, A. C., Eaton.

OKLAHOMA.

Scott, J. H., Shawnee.
Koons, R. F., El Reno.
McCray, Oran D., Binger.

OREGON.

Brock, L. J., Sumpter.
Kinney, Alf., Astoria.

PENNSYLVANIA.

Boyce, D. C., Allegheny.
LeBoutillier, Theo., Philadelphia.
Corson, Geo. R. S., Philadelphia.
Baldwin, J. H., Philadelphia.
Karpeles, M. J., Philadelphia.
Smith, Caroline E., Philadelphia.
Fetterolf, George, Philadelphia.
Moylan, John J., Philadelphia.
Illman, G. M., Philadelphia.
Landis, H. R. M., Philadelphia.
Yeager, G. C., Philadelphia.
Parish, B. D., Philadelphia.
Ward, N. G., Philadelphia.
Stern, Max J., Philadelphia.
Irwin, J. A., Philadelphia.
Stewart, John, Philadelphia.
Shelmerdine, E. K., Philadelphia.
Robertson, J. F., Philadelphia.
Hulsizer, G. R., Philadelphia.
Godfrey, H. B., Philadelphia.
Drein, Wm. C., Philadelphia.
Allyn, Herman B., Philadelphia.
Cruice, John M., Philadelphia.
Bryan, Henry N., Philadelphia.
Berlet, Jas. F., Philadelphia.
McCamy, Robt. H., Philadelphia.
Thrush, Morris Clayton, Philadelphia.
Jones, Thos. E., Philadelphia.
Skillern, Samuel R., Philadelphia.
Harbridge, D. T., Philadelphia.
Auspach, B. M., Philadelphia.
Murdoch, J. Floyd, Pittsburg.
Matheny, Albert R., Pittsburg.
Weiss, E. A., Pittsburg.
Anderson, G. R., Barnesboro.
Knedler, J. W., Scranton.
Kauffman, John W., Reading.
Irvine, Geo. R., Clearfield.
Hunter, M. C., Sayre.
Hay, George, Johnstown.
Hurd, M. E., La Jose.
Heinen, Gustaf F., Ralston.
French, Edward E., Ellsworth.
Wilson, J. D. M., Washington.
Veatch, N. S., California.

RHODE ISLAND.

Hoye, Henry Jos., Providence.
Burdick, Frank E., Providence.
Best, O. Fletcher, Providence.

SOUTH CAROLINA.

Wilson, G. D. F., Spartansburg.

SOUTH DAKOTA.

White, J. W. C., Plankinton.

TENNESSEE.

Ware, W. W., Covington.
King, Walter P., Lutts.
Brinkley, G. T., Fayette Corners.
Allen, A. M., Buford.
Brown, Horatio H., Sharon.
Blackburn, Jas. Knox, Lynnville.
Fittsworth, B. M., Dandridge, R. F. D., No. 3.
White, C. A., Memphis.
Thompson, Sidney, Humboldt.

TEXAS.

Brown, B. F., Crockett.
Ragland, T. S., Gilmer.
Hunter, J. R., Hornsby.
Speer, J. A., Itaska.
Alexander, Edw., El Paso.
Guinn, E. E., Jacksonville.

UTAH.

Taylor, Fred W., Provo.
Gibson, T. C., Salt Lake City.
Holmquist, A. J., Helper.

VERMONT.

Hanson, H. B., Hinesburg.
Ross, L. H., Bennington.
Hack, T. H., Proctor.

VIRGINIA.

Hurt, A. J., Ballsville.
Webb, F. B., Roanoke.
McCabe, W. O., Thaxton.

WASHINGTON.

Panks, Rush, Centralia.
Marsh, Mariette, Seattle.

WEST VIRGINIA.

Lind, G. D., New Richmond.
Stone, T. M., Pine Grove.
Patton, H. W., Decatur.
Bush, Allen, Morgantown.

WISCONSIN.

Lester, Wm. A., Onalaska.
Lester, H. S., Union Grove.
Spitz, M. M., Milwaukee.
Phillips, T. C., Milwaukee.
Pullen, A. J., N. Fond du Lac.
MacGregor, S. A., Nekoosa.

WYOMING.

Denison, E. G., Spring Valley.

PHILIPPINE ISLANDS.

Musgrave, Wm. E., Manila.

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, for the week ending March 5, 1904:

Moseley, E. B., deputy surgeon general, granted thirty days' leave about March 1, with permission to apply for an extension of three months and to go beyond the sea.

Patton, I. W., asst.-surgeon, extension of leave revoked.

Bourke, James, asst.-surgeon, relieved from temporary duty as attending surgeon and examiner of recruits, Chicago, and ordered to Fort Sheridan, Ill., for duty.

La Garde, Louis A., surgeon, relieved from duty in Washington, D. C., and ordered to the Philippine Division for duty.

Harvey, Philip F., asst.-surgeon general, left Chicago on thirty days' leave, with permission to apply for thirty days' extension.

Chambers, William H., contract dental surgeon, reported February 19 at Atlanta, Ga., for duty in the Department of the Gulf. He was assigned to station at Fort McPherson, Ga., but February 24 went to Camp George H. Thomas, Ga., for a temporary tour of duty.

Sorber, Ord M., contract dental surgeon, having completed his temporary duty at Fort Bliss, Texas, reported February 25 at Fort Clark, Texas, for temporary duty.

Mills, Frederick H., Patterson, Edwin W., Springwater, Samuel A., Burkart, John L., MacDonald, Charles E., Miller, William G., Newton, Ralph W., and Graves, Leonard K., contract surgeons, sailed on the *Sherman* March 1 for service in the Philippine Division.

Mabry, William C., contract surgeon, granted leave of absence for ten days from Columbus Barracks, Ohio.

Ferguson, James B., contract surgeon, left Boise Barracks, Idaho, February 27 for San Francisco, to assume duty as transport surgeon of the *Dix*.

Stoney, Randell C., contract surgeon, relieved from further duty at Fort Screven, Ga., and assigned to permanent station at Fort Hamilton, N. Y., where he has been on temporary duty for some time.

Navy Changes.

Changes in the medical corps of the Navy, week ending March 5, 1904:

Spratling, L. W., surgeon, ordered to report for special temporary duty in the Bureau of Medicine and Surgery, Navy Department.

DeVries, J. C., A. A. surgeon, detached from duty with recruiting party No. 2 and ordered to Recruiting Station, Baltimore.

Janney, W. H., A. A. surgeon, detached from the Naval Recruiting Station, Baltimore, and ordered to duty with recruiting party No. 2.

Taylor, J. S., P. A. surgeon, detached from the Naval Hospital, New York, and ordered to accompany a marine battalion to San Francisco, and thence to the U. S. S. *Relief*.

McCullough, F. E., P. A. surgeon, ordered to the Asiatic station, sailing about March 9.

Strine, H. F., asst.-surgeon, detached from the Naval Station, Olongapo, P. I., and ordered to the *Annapolis*.

Murphy, J. F., asst-surgeon, detached from the *Wisconsin* and ordered to the *Isla de Cuba*.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from February 26 to March 5, 1904:

SMALLPOX—UNITED STATES.

Arkansas: Fort Smith, Feb. 13-20, 5 cases.
California: San Francisco, Feb. 14-21, 9 cases.
Colorado: Denver, Dec. 26-Jan. 30, 18 cases.
Delaware: Wilmington, Feb. 20-27, 1 death.
District of Columbia: Washington, Dec. 20-27, 7 cases.
Florida: Jacksonville, Feb. 20-27, 1 case.
Illinois: Belleville, Feb. 6-27, 7 cases; Feb. 20-27, Chicago, 2 cases; Danville, 1 case.
Maryland: Baltimore, Feb. 20-27, 2 cases.
Michigan: Detroit, Feb. 20-27, 1 case; 83 localities, Feb. 13-20, present.
Missouri: St. Louis, Feb. 20-27, 9 cases, 1 death.
New Hampshire: Manchester, Feb. 20-27, 3 cases.
New Jersey: Trenton, Feb. 20-27, 3 deaths.
New York: Buffalo, Feb. 20-27, 1 case.
Ohio: Bucyrus, Feb. 20-27, 3 cases; Cincinnati, Feb. 12-26, 9 cases, 1 death; Cleveland, 20-26, 1 case; Toledo, Feb. 20-27, 1 case.
Pennsylvania: Feb. 20-27, Allentown, 1 case; Johnstown, 2 cases; Philadelphia, 26 cases, 12 deaths; Pittsburg, 2 cases imported; Williamsport, Feb. 13-27, 7 cases, 2 deaths.
South Carolina: Charleston, Feb. 20-27, 6 cases, 1 death.
Tennessee: Feb. 20-27, Memphis, 35 cases; Nashville, 15 cases.
Virginia: Pocahontas, Feb. 1-29, 7 cases.
Wisconsin: Milwaukee, Feb. 20-27, 4 cases.

SMALLPOX—FOREIGN.

Africa: Dec. 1-31, Cape Town, 1 case; Green and Sea Point, 1 case.
Austria: Prague, Jan. 30-Feb. 13, 11 cases.
Belgium: Jan. 30-Feb. 13, Antwerp, 9 cases, 2 deaths; Brussels, 2 deaths.
Brazil: Rio de Janeiro, Jan. 24-31, 29 cases, 19 deaths.
Canada: Quebec, Feb. 13-27, 6 cases.
China: Jan. 9-16, Hongkong, 2 cases; Shanghai, 20 deaths.
France: Nantes, Jan. 1-31, 2 cases; Rheims, Feb. 7-14, 1 case.
Great Britain: Feb. 6-13, Edinburgh, 19 cases, 1 death; Hull, 3 cases, 1 death; Manchester, 1 case; South Shields, 2 cases, 1 death; Jan. 30-Feb. 13, Leith, 5 cases; London, 11 cases.
India: Bombay, Jan. 26-Feb. 2, 10 deaths; Karachi, Jan. 24-31, 1 case.
Java: Batavia, Jan. 16-23, 15 cases, 2 deaths.
Malta: Jan. 16-30, 4 cases.
Mexico: City of Mexico, Feb. 14-21, 16 cases, 8 deaths.
Netherlands: Amsterdam, Feb. 6-20, 7 cases, 1 death.
Russia: Moscow, Jan. 23-Feb. 6, 15 cases, 5 deaths; St. Petersburg, Jan. 30-Feb. 6, 2 cases, 2 deaths.
Spain: Santander, Jan. 8-15, 3 cases.
Turkey: Constantinople, Jan. 31-Feb. 14, 23 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, Jan. 24-31, 5 cases, 1 death.
Mexico: Feb. 13-20, Merida, 1 case; Vera Cruz, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Provinces, Jan. 9-16, 219 cases, 163 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Jan. 23-30, 27 deaths; Madras, Jan. 16-22, 2 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Feb. 8, 1 case bacteriologically confirmed February 27.

PLAGUE—INSULAR.

Philippine Islands, Manila, Jan. 9-16, 5 cases, 4 deaths.

PLAGUE—FOREIGN.

Africa: Port Elizabeth, Jan. 9-16, 2 cases, 2 deaths.
Brazil: Para, Jan. 28-30, 9 cases; Rio de Janeiro, Jan. 24-31, 8 cases, 5 deaths.
India: Bombay, Jan. 26-Feb. 2, 384 deaths; Calcutta, Jan. 23-30, 17 deaths; Karachi, Jan. 24-31, 11 cases, 10 deaths.
Mauritius: Jan. 21-Feb. 4, 45 cases, 32 deaths.

Society Proceedings.

COMING MEETINGS.

Medical Society of the Missouri Valley, Lincoln, Neb., March 24.
Medical Association of the District of Columbia, Washington, April 5.
Tennessee State Medical Association, Chattanooga, April 12.
South Carolina Medical Association, Darlington, April 13.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held March 2, 1904.

The President, Dr. R. B. Preble, in the Chair.

Hereditary Syphilis.

DR. HUGH T. PATRICK presented a woman 41 years of age, whose trouble dated back to 1899. He saw her in 1901 for the first time. She suffered from dizziness, failure of vision, intense headaches, and considerable mental and physical hebetude. Following this she developed double vision, which lasted for a few months. Acuity of vision diminished rapidly. Some time later she fell and was unconscious for a short time. When she regained consciousness she vomited. A month later she had another fall, and was also unconscious for a short time. During all this time the severe headaches continued. After several months of these headaches, mental hebetude, double vision, and two unconscious attacks, she was removed to St. Luke's Hospital, and on the day following her arrival became unconscious, and remained so for twenty-four hours. She vomited just before she became unconscious. When she regained consciousness, everything looked blurred, and the left side was paralyzed. The arm became weak first, then the leg, and later the face became involved. With the left hemiplegia there was marked sensory disturbance; marked anesthesia, which continued for a considerable time. Two years after the attack, when patient had regained very good use of the left side, there was still considerable subjective trouble on that side, but very little objective trouble. Patient uses the left hand for practical purposes, but it is not as dexterous as it was, and it feels queer. She has complete homonymous hemianopia. The visual field is normal on one side, but gone on the other. As the result of her trouble, the patient has permanent hemianopia, although she has nearly recovered from her left hemiplegia. The patient is absolutely ignorant of any specific infection.

Dr. Patrick presented another case, a woman 21 years of age, whose mother is at present suffering from tabes, with optic atrophy. The oldest child, a son, died about two years ago from general paresis. The next child, also a son, is at present suffering from tabes, with optic atropny. Patient is the third and only remaining child, who, as an infant, had snuffles, and later developed mucous excrescences. Two and a half years ago she had a typical interstitial keratitis, but up to three years ago, aside from the trivial ailments of childhood, she was well. One day, while sitting on the step, she had a sort of stroke without loss of consciousness; became weak on one side, more especially in the face. The next morn-

ing she had another stroke which involved all of the right side. This attack was transient. A month later she had another attack of right hemiparesis, which was a little more severe, and three months later a fourth attack, which was very severe, which left her completely hemiplegic on the right side with aphasia. First the face, then the arm and leg became involved. A year and a half ago patient developed typical jacksonian fits. These fits started with twitching and drawing in of the right side of the face, which extended to the arm, then to the leg, after which she had a general epileptic attack. Sometimes the spasm does not go so far. The face and arm may be convulsed, with no loss of consciousness. Sometimes she has a severe attack which terminates in a general convulsion. Attention was called to the defective teeth of the patient. She also has a disseminated choroiditis. Patient showed unmistakable signs of hereditary syphilis, and Dr. Patrick said the question arose whether the two boys inherited syphilis or had it communicated to them as children. Either was possible; but the family showed the relation between specific disease, tabes and general paresis.

DR. L. BLAKE BALDWIN showed a Chinaman with syphilis. He had treated eleven cases of this disease in Chinamen. He brought the case for diagnosis. As it was difficult to get a history of such cases, he ventured to say that 90 per cent. of the cases of Chinamen who consult physicians have this disease. With this thought in mind he had given all of them iodid of potassium with good results in most cases. When these patients presented themselves with facial paralysis, paralysis of the arm and leg, with large ulcerations on the leg, it was wise to give them iodid of potassium. The patient denied any initial lesion. Dr. Baldwin also showed several other cases.

DR. FREDERICK MENGE showed three cases. One was a boy 12 years of age who had hereditary syphilis. Patient had an active proliferating gumma in the nose, springing from the septum on both sides, filling the interior meatus and occluding both nostrils. He had also complete erosion of the uvula.

The second case was a young man who had large syphilitic eschars on the soft and hard palates. The uvula was almost obliterated from syphilitic erosions. In this case the infection occurred thirteen years ago, while the erosions caused the scars three years ago.

DR. GEORGE F. SUKER showed a boy who had a typical syphilitic head. He had the tripod of Hutchinson; interstitial keratitis, otitis media, and saddle nose, as well as syphilitic rhinitis, bilateral dacryocystitis and stenosis of the lachrymal duct. Patellar tendon reflex was not lost. Patient had what is called the Darier tooth; atrophy of the upper jaw and of the hard palate. Patient had had these affections since the second week of birth. Attention was called to the typical Hutchinson teeth. The boy was a typical example of inherited syphilis.

DR. E. A. FISCHKIN presented a patient who gave a history of having had a primary lesion some twelve years ago, the nature of which was not definitely known. Patient said he did not have secondary lesions, but did have mucous patches, and was free from other manifestations of syphilis for twelve years. Patient had been married five years, and had healthy children. About fourteen months ago purpuric spots began to appear on the lower extremities. Three months ago tubercles appeared on the side of the nose, which were circinate in form, gradually enlarged, and finally ulcerated. Patient was put on iodids and given inunction treatment. Soon the whole leg was covered with purpura, but the spots were closer together, particularly on the surface where the ointment was rubbed in. The question arose in the author's mind as to whether he was justified in calling the case purpuric syphilis, or was the purpura due to the toxic effect of the treatment. Against the latter, it should be said that the patient had purpura twelve weeks ago without treatment.

The second case was a girl 15 years of age who presented a typical tertiary, ulcerating syphilid on the leg. Patient also presented syphilitic scars of the type represented by atrophy and pigmentation. The history was entirely negative. The disease was of two years' duration. If she had acquired syphilis, the primary infection must have occurred when she was 12 or 13. There were a number of scars on the leg and a general adenopathy.

DR. GEORGE F. SUKER showed two cases of syphilitic iritis. In one the eye was very painful, while in the other there was scarcely any pain. One had a small corneal ulcer. The patient admitted having had syphilitic infection about a year ago, but now had the secondary manifestations of the disease, with marked adhesions of the iris, and excessive proliferation of the pigmentary layer of the posterior surface of the iris, with a large portion of the anterior surface of the capsule of the lens being involved. There was great reduction of sight, with pupillary adhesion. The corneal ulcer was situated toward the nasal side.

DR. DAVID LIEBERTHAL showed a case of secondary syphilis, and discussed the differential diagnosis between this disease and lupus vulgaris.

DR. W. L. BAUM showed a patient on account of the anomalous action of some scar tissue of syphilitic origin. The man was under treatment at his clinic a number of years ago. At that time he presented himself with a history of specific infection, followed by ulcerations and keloid-like scars. These were hard and firm and projected beyond the surrounding skin. They appeared under treatment, but a feature of unusual interest was that repigmentation had started in the scar tissue. This was generally denied by dermatologists. He was not prepared to offer any explanation for it, but it was contrary to ideas of pathology and the physiologic relations of this process.

DR. HUGH T. PATRICK, after examining Dr. Baldwin's case of the Chinaman, said that it was one of thrombosis of the sylvian artery, with right hemiplegia and aphasia. The patient had exaggerated reflexes and the typical Babinski sign.

KANSAS CITY ACADEMY OF MEDICINE.

Regular Meeting, held Feb. 29, 1904.

General Anesthesia.

The attendance was large, with an unusually large number of visitors present.

DR. GEORGE SEITZ read the paper assigned on the program on "General Anesthesia." In general surgical anesthesia complete paralysis of sensibility is required, but different operations demand different degrees of anesthesia. When possible the patient should be prepared by having the bowels moved and the last meal before the anesthesia should be at least six hours previous. It should consist of light food only. The patient's physical condition should be thoroughly studied. In giving the anesthetic it should be purposed to cause as little excitement of the patient as possible and to give the very least amount of ether or chloroform sufficient to produce the desired effect. With chloroform the pulse should not be allowed to fall below 60, and with ether a pulse of 150 need occasion no alarm. The head should be kept turned to one side, and the pharynx and mouth occasionally wiped in order to prevent the inspiration of saliva which, with ether, is secreted in an excessive amount. The occiput should be held well back, no pillow should be used and the jaw held slightly forward. This position facilitates free breathing. The pupil should never be dilated. Esmarch's mask is good, as is also the Allis cone. The latter is hard to keep clean. Mouth gag, tongue forceps, sponge forceps, hypodermics and stimulants must be provided before any anesthesia is begun. In lung diseases, such as bronchitis, asthma, or emphysema, chloroform should be selected. In mitral lesions chloroform should be given. In aortic lesions, aneurism, or atheroma, it is well to begin with chloroform and to continue with either. Degeneration of the myocardium contraindicates any anesthetic. In kidney disease ether is not contraindicated, but many prefer chloroform. For general work and in the vast majority of cases anesthesia induced by nitrous oxid and continued with ether is the best. Dr. Seitz prefers Bennett's apparatus to any other.

The paper was discussed by Drs. Anderson, Fulton, Mallett, Van Eman, West, Lichtenberg, O'Donnell, Hertzler, Gray, Crabill, Beattie, Sloan and Ritter.

Therapeutics.

Gonorrhea.

The following treatment of gonorrhea has been carried out successfully by Dr. David Shoemaker of Truckee, Cal., and he has derived excellent results in a limited number of cases. He sends us the description in order that his method may be tried more extensively. The technic is as follows: "To two quarts of quite warm water, in a fountain syringe, add six ounces of a saturated solution of picric acid; attach a small No. 9 soft rubber catheter to the nozzle of the syringe and proceed to irrigate. In a recent case, allow the flow to begin as soon as the eye of the catheter has passed the meatus, and wash out only the first two or three inches of the urethra. In an old case that has invaded the posterior urethra, detach the catheter, pass it into the bladder and allow the urine to escape, then attach it to the syringe and partially fill the bladder with the solution, directing the patient to retain this as long as he can conveniently. The catheter is then slowly withdrawn until the solution flows back through the meatus, retaining the catheter at the point at which this occurred until the irrigation is completed. The retained fluid in the bladder prevents infection of that organ and is curative if that has already occurred. This solution causes practically no pain, and its strength may be greatly increased without discomfort to the patient. To avoid a disagreeable staining of the operator's fingers, some lubricant should be used on them. In fresh cases it is rare to see a purulent discharge after the first irrigation and in the older cases the improvement is noticeable at once. This solution is never placed in the hands of the patient for use."

The foregoing treatment is certainly definitely outlined, making it of practical benefit.

Asthma in Children.

According to *Rev. de Ther.*, the best remedy for the treatment of asthma in children is belladonna, giving one pill daily of extract of belladonna, gr. ⅛ (.008), or pulverized belladonna, gr. 1/6 ((.01).

The following combinations are also recommended in the treatment of asthma:

℞ Ext. grindeliæ robustæ
Tinct. lobeliæ, āā ..... gtt. xv 1
Tinct. pulsatillæ ..... ʒss 2
Syr. aurantii flor. q. s. ad ..... ʒiii 90
M. Sig.: To be taken in one or two days.

In the intervals the iodids should be given. The following combination serves the purpose:

℞ Sodii arsenatis ..... gr. 1/3 02
Potass. iodidi
Potass. bromidi, āā ..... gr. xxx 2
Tinct. lobeliæ ..... m. xxx 2
Syr. aurantii flor. q. s. ad ..... ʒiv 120
M. Sig.: One teaspoonful three times a day.

Thrush.

In the treatment of thrush, where there are simply white, isolated, slightly elevated, firmly adherent dots or macules, Dr. E. Graetzer, in *Post Grad.*, recommends repeated cleansing of the mouth with water, especially after meals. Mechanical rubbing with the finger wrapped in fine linen or absorbent cotton—whereby slight bleeding need cause no alarm—will usually suffice. In the confluent form, where the whole buccal mucous membrane down to the pharynx is dark red, dry and covered with numerous white patches or even where large white membrane covers the surface, tonics are indicated, as the patients are usually exhausted or atrophic. The underlying cause, such as diarrhea, must be treated. Locally the mouth must be washed with an alkaline solution, such as sodium borate or a solution of benzoate of sodium, 40 per cent. strength; or salt water, half a teaspoonful of salt to a glass of water. Some authors use potassium permanganate, 1 to 100; or sodium borate in glycerin, 1 to 4. "Sucking bags," containing boracic acid, are of value. A pledget of sterilized cotton, well covered with finely powdered boracic acid mixed with saccharin, is wrapped in a small sterilized rag of silk or fine gauze and given to the child to suck and chew on. These bags should be renewed once in twenty-four hours. In severe cases, the author advocates an application of silver nitrate, 1 to 3 per cent., once daily.

As prophylactic treatment, thorough cleanliness of the nipples and breasts must be observed. The breast nipples should be washed with an alkaline solution before and after nursing. The rooms must be well ventilated, general health improved and any gastrointestinal disturbances corrected. In thrush involving the esophagus and stomach the internal administration of resorcin (.5 to 1.00 to 100) is of benefit.

Holt recommends solutions of sodium borate or sodium bicarbonate, ten grains to the ounce, and applied four times daily, observing care not to injure the epithelium. Applications containing honey or syrup must especially be avoided where the disease is produced by irritation of the rubber nipple. feeding by gavage is resorted to for two or three days, under which method improvement takes place more rapidly.

Epilepsy.

In the treatment of epilepsy medicinally, according to Bjorkmann in *Merck's Archives*, the bromids should be pushed to their full physiologic limit. To begin with, he recommends the potassium salt in doses ranging from grains 40 (2.65) to grains 75 (5.00) daily, increasing it to triple the amount if necessary. If the digestive organs rebel the salt may properly be given in Vichy or seltzer water, or the sodium salt may be substituted, given as follows:

℞ Sodii bromidi ..... ʒii 60
Sig.: One teaspoonful in a claret glass of seltzer water before meals and repeated once during the day.

Or the bromids may be given in combination as follows:

℞ Sodii brom.
Ammon. brom., āā ..... gr. lxxv 5
Aq. menth. pip. ..... ʒii 60
M. Sig.: One teaspoonful morning and night.

And for children the following combination:

℞ Sodii brom.
Potass. brom., āā ..... gr. lxxv 5
Ammon. brom. ..... gr. xl 2 65
Aq. destil. ..... ʒvii 210
M. Sig.: A dessertspoonful to a tablespoonful three to five times a day, according to the age.

A good combination for adults is the following:

℞ Pot. brom. ..... ʒv 20
Ammon. brom. ..... ʒiiss 10
Sodii brom. ..... ʒv 20
M. Sig.: One-half a teaspoonful dissolved in seltzer water three times a day.

Bromids, according to the author, should always be given before meals, well diluted. Larger doses should be given before the expected paroxysm, which will at least shorten the spell if not abort it. In some cases the bromid may be combined with chloral or opium for a short time only. In cases where a heart tonic is indicated in combination with the bromids the following may be prescribed:

℞ Infus. digitalis ..... ʒii 60
Sodii bromidi ..... ʒiiss 10
Ol. menth. pip. ..... gtt. i 06
Syrupi q. s. ad ..... ʒvii 210
M. Sig.: One tablespoonful every two hours, to be continued for several weeks.

Or the following may be substituted:

℞ Infus. adonis vernalis ..... ʒv 150
Sodii brom. ..... ʒiiss 10
Olei menth. pip. ..... gtt. iii 20
M. Sig.: One tablespoonful morning and night.

In cases of idiosyncrasy for the bromids the following containing sodium borate may be substituted:

℞ Sodii boratis ..... ʒi 4
Aq. destil. ..... ʒv 150
Syr. aurantii corticis q. s. ad ..... ʒvi 180
M. Sig.: One tablespoonful two or three times a day.

During an epileptic attack the patient should be placed in a recumbent position, the clothing loosened about the neck and waist. The tongue of the patient should be protected by placing rubber or cork between the teeth. If status epilepticus is feared, it may be wise to prevent exaggerated convulsions by administering a small amount of chloroform. In petit mal, nitroglycerin is frequently of great service, producing, as it does, a moderate hyperemia of the brain, if the doses are not too liberal, grain 1/100 to 1/50 (.0006-.0012).

The attempt to prevent or check an attack at the appearance of the aura, either by constricting or rubbing the part from which the aura emanates, is sometimes successful.

The following combination, which is recommended by Dr. Daniel R. Brower, seems to be the ideal combination in the treatment of epilepsy:

R.	Sodii bromidi	℥x	40
	Ext. solani carolinense flu.	℥ii	60
	Aq. camphoræ q. s. ad	℥iv	120

M. Sig.: One teaspoonful three times a day in water.

To prevent the acne which may be caused by large doses of the bromids small doses of arsenic may be added in the form of Fowler's solution or Pearson's solution, two or three drops of either. If a heart tonic is indicated four or five drops of the tincture of adonis vernalis may be added to each dose of the bromid.

The following combination containing chloral is sometimes of service in nocturnal epilepsy:

R.	Chloralis	gr. lxxx	5 30
	Pot. bromidi	℥ii	8
	Syr. aurantii	℥iv	15
	Aq. menth. verid. q. s. ad	℥ii	60

M. Sig.: One dessertspoonful at bedtime in water.

Strontium bromid is said to contain a greater amount of bromin than the other salts. It may be given as follows:

R.	Strontii brom.	℥v	20
	Sodii brom.	℥iiss	10
	Aq. feniculi q. s. ad	℥iv	120

M. Sig.: One teaspoonful after meals and at bedtime in water.

Medicolegal.

Dying Declarations.—The Supreme Court of Louisiana holds, in the case of State vs. Brown, that declarations properly considered at the time to be dying declarations do not lose their character as such by the fact that the party making them lives some time afterward.

Permitting Expert Witnesses to Remain in Courtroom.—The Supreme Court of Louisiana holds, in the homicide case of State vs. Forbes, that a ruling of the court permitting expert witnesses to remain in the courtroom during the trial is not ground to set aside the verdict. The rule, it says, is largely left to the discretion of the trial judge.

Liability for Care of Smallpox Patients in Iowa.—The Supreme Court of Iowa says, in the case of Walker vs. Boone County, brought by a physician, to recover for services rendered in taking charge of a pest-house and caring for smallpox patients, after a city board of health had approved his claim, that the mayor and city council of each city in that state constitute a local board of health. And where it is made to appear that smallpox or other disease dangerous to the public health exists, the board has power to make provision for the care of patients, and may remove the same to a separate house, or to a detention camp or hospital. It may provide nurses, needful assistance and supplies, which shall be charged to the patient, or those liable for his support, if able; if unable, it shall be done at the expense of the county. Code, Section 2570. By Code, Section 2571, it is further provided, among other things, that all expenses incurred in the enforcement of the provisions of the Code relating to the public health, when not otherwise provided, shall be paid by the city. The expression "when not otherwise provided," as used in this section, can have relation only to the provision made in Section 2570 for charging matters of expense to the county, as the matter of the expense incident to the enforcement of the laws relating to public health is nowhere else referred to. Now, the reading of the provision in Section 2570 is plain, and the meaning unmistakable. If the patient is unable to pay, and those liable for his support are unable to pay, then the county must bear the expense. The corollary follows that the county can not be made to pay except that the conditions on which its liability depends are made to appear. In this case the record did not disclose that the physician suing made proof that the patients attended by him and those liable for their support were unable to pay. Such being the condition of the record, it followed that the trial court did not err in sustaining a motion for a verdict in favor of the county and entering a judgment against the party suing for costs.

Waiver of Privilege Extends to Future Trials.—The Second Appellate Division of the Supreme Court of New York, in considering, in the case of Schlotterer vs. the Brooklyn and New York Ferry Co., the effect of the provision of the statute that the express waiver of privilege required must be "on the trial or examination," says that the purpose of the statute is to cover the relation of physician and patient with the cloak of confidence. The purpose is to save the patient from possible humiliation or distress, not to enable him to win a lawsuit. If the patient once permit the physician to testify, there is no longer any reason at any time for excluding competent testimony under the plea of public policy. If the patient once voluntarily renounce the protection of the statute, his waiver is everlasting and irrevocable. So it thinks that the purpose of the provision referred to was not to limit the continuous force of a waiver, and thus to permit the patient to use the statute once as a shield and anon as a sword, but by way of further assurance that the waiver had been formally, clearly, and certainly made. Nor does it think that the language of the statute, in the further provision that the waiver "must be made in open court on the trial of the action or proceeding," authorizes a construction which affords the privilege, notwithstanding the reason for its continuance has ceased to exist. it says that it simply means that, when the waiver is made, it must be made in open court on a trial of the action. It thus affords a safeguard that the waiver was duly made, but not a shift of the waiver, once made. And the court holds that a trial was a trial of the action, within the purview of the statute, where it appeared that, after trying her case after a nonsuit, the party suing began anew, but proceeded on the same cause of action against the same defendant.

Impotence and Marriage and Divorce.—The Court of Chancery of New Jersey says, in what is entitled the case of "G—— vs. G——," that cases of impotence are so rare that the rules governing the action of the courts in such cases are not thoroughly settled. In England the notion seems to have been entertained formerly that complete impotence rendered a marriage void from the beginning, precisely the same as would the existence in life at the time of the marriage of an undivorced spouse of one or the other of the parties, or the fact that the parties were related within the prohibited degrees of consanguinity. This is evidenced by the mode in which suits were framed. The English judicial reports show that suits for a declaration of nullity on account of impotence were framed in this wise: A., falsely called B., vs. B. This was the form in suits for nullity for the other two causes mentioned. But the later cases establish clearly the doctrine that contracts of marriage between parties, one of whom is impotent, are voidable, merely. In New Jersey, the legislature, in the revision of the divorce act of 1902, has provided for decrees from the bond of matrimony in cases of adultery, desertion, and incurable impotence, using the following language: "In case the parties, or either of them was at the time of the marriage physically and incurably impotent, or was incapable of consenting thereto, and the marriage has not been subsequently ratified." In a case of impotency the parties have the power to contract, and the marriage is binding for all purposes, unless it is dissolved by a decree of court at the instance of the party having the right to make the complaint. Thus it seems

clear that the widow of an impotent husband would be entitled to dower in his estate, in the absence of a decree of dissolution. The ground on which the decree of dissolution is based is not an original incapacity to contract, but the entire and complete failure of the consideration of the marriage contract. Hence the better doctrine is that the contract of marriage is voidable merely, and not void from the beginning. The statute quoted assumes that it may be ratified. But be that as it may, the clear trend of authority, as stated, is that the marriage is not void from the beginning, but merely voidable at the instance of the disappointed party. If that is so, then the correct doctrine is that such party may ratify it. It is suggested with much force that such ratification may result from a long-continued acceptance and enjoyment of the benefits of a merely platonic marriage, so that the disappointed party will not be permitted, after such long enjoyment, to repudiate the contract.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

February 27.

1 *Diagnosis and Treatment of Thoracic Aneurism. Stephen S. Burt.
2 *Retroperitoneal Infection a Result of Appendicitis. I. S. Stone.
3 *"Urethral Labia," or "Urethral Hymen." Pathologic Structures, Due to Repeated Traction. Robert L. Dickinson.
4 *A New Technic in Operations for Appendicitis. W. Easterly Ashton.
5 Pathology of Leukemia. Edward T. Williams.
6 *Treatment of Cervical Adenitis. F. S. Bulkeley.
7 Report of Hemorrhagic Septicemia in Animals in the Philippine Islands. Paul G. Woolley and J. W. Jobling.

1. Thoracic Aneurism.—Burt's article is very detailed as regards diagnosis—too much so to be easily abstracted. He notices the leading characteristic symptoms, such as tracheal tugging, physical signs, pain extending down the right arm and dyspnea, and discusses in particular the characteristic differences between aneurism and malignant growths. For treatment he recommends absolute rest, mental as well as physical, and restriction in the amount of food, especially fluid, and iodid medication. All these expedients are intended to favor the deposition of fibrin in the sac. Sacculated aneurisms with relatively small openings are most benefited by treatment. He does not speak well of the use of the introduction of foreign bodies into the sac as a satisfactory method. Three cases are reported, one with recovery, under the potassium iodid treatment.

2. Appendicitis.—Stone calls particular attention to the dangers of retroperitoneal abscess, especially in cases where the appendix points to the left and downward. The symptoms are mainly those of septicemia in addition to appendicitis. Persistent high temperature and quick pulse after appendectomy should always suggest posterior complications, especially when one or two weeks have elapsed before operation. Such symptoms may disappear, but not as a rule, and it is important that we should check what may become systemic infection. He sums up the indications as follows:

1. We should consider every "delayed case" with anxiety, lest there should be retroperitoneal infection.
2. We should be careful to give a guarded prognosis in every case of appendicitis ushered in by, or complicated by chills or any symptoms of sepsis.
3. If operating in such cases, we should consider retroperitoneal infection as already started and act accordingly. The discovery and proper treatment of such infection is quite as important as the usual intraperitoneal technic.

In view of the possibilities of retroperitoneal infection, we assume a great responsibility by advising non-intervention in appendicitis, and while we often advise delay when we believe the lesions strictly intraperitoneal, yet it would appear that such a course is very unsafe and it should be condemned when we have reason to fear the complications described.

3. Urethral Labia.—Dickinson notices the recent paper by Howard Kelly in *American Medicine*, Sept. 12 and 19, 1903, noticed in THE JOURNAL of Sept. 26 and Oct. 3, 1903, pp. 805 and 878, and remarks that he described the same condition in *American Gynecology*, September, 1902. (See THE JOURNAL, Oct. 25, 1902, p. 1073.) The so-called urethral labia are not normal protective organs, as Kelly supposed, but are always artificial and pathologic. They occur only when there are hypertrophies at the labia minora and clear-cut evidence of traction, pressure and friction. He considers that they are an enlargement of the anterior portion of the hymen. They have no protective function, but are connected with special sense. The only certain method of cure is section with the cautery wire.

4. Appendicitis.—The new operation described by Ashton consists in pulling out the head of the cecum from the wound, keeping the appendix taut with control ligatures, then packing with gauze and severing the appendix at its origin and closing with a purse-string suture, supplemented by a Lembert suture to prevent leakage. The article is very fully illustrated. The steps of the operation are given as follows:

1. After the appendix has been located and freed from adhesions, the head of the colon is brought within the abdominal incision. A No. 7 braided silk ligature is then tied around the tip of the appendix, the free ends knotted and the loop, which should be about 6 inches long, is held taut by the assistant.
2. A ligature of the same material is now passed through all the coats of the colon, except the mucous, about three-quarters of an inch beyond each side of the base of the appendix. The free ends of the ligatures are then tied, leaving two loops, each 6 inches long, which are used to control the head of the bowel. A purse-string suture is now passed through all the coats of the bowel, except the mucous, about a half inch from the base of the appendix.
3. The appendix and head of the colon are now completely under the control of the operator, who keeps the appendix taut by traction on the ligature, which is tied around its tip. At the same time the assistant grasps the loop on each side of the base of the appendix, and by making traction on them holds the head of the colon well within the abdominal incision.
4. The seat of operation is now shut off from the surrounding parts by packing a strip of plain gauze around the head of the colon.
5. The mesoappendix having been previously ligated and severed, a circular incision is made through the serous coat of the appendix about a half inch above its base.
6. The peritoneum is then stripped back beyond the base of the appendix with the scalpel.
7. The appendix is now amputated below its base with scissors curved on the flat.
8. The opening in the bowel is now closed by inverting its edges with forceps as the purse-string suture is tied, and subsequently introducing a mattress suture to guard against leakage.
9. The operator now douches the seat of the operation with warm normal salt solution, and dries the parts with a gauze sponge. The gauze packing is then removed; the control ligatures cut and withdrawn from the bowel; and the head of the colon allowed to sink into the abdominal cavity.

Special Directions.—The control ligatures which pass through the walls of the colon on either side of the base of the appendix must penetrate only the submucous or fibrous coat, because if they enter the lumen of the gut, infection may result from capillary attraction.

From the time the appendix is amputated until the opening in the colon is sutured and the field of operation douched and dried, the assistant must keep the control ligatures taut to prevent the bowel from becoming displaced and infecting the surrounding intestines.

The serous coat of the appendix must be stripped off well below its base so that when it is amputated a portion of the wall of the colon is also removed. This not only thoroughly eradicates all the diseased structures, but it also leaves no redundant tissue to interfere with the close approximation of the edges of the wound. As a matter of fact, under these circumstances, the serous coat usually retracts and partially closes the opening before the purse-string suture is drawn taut. The antiseptic precautions employed during the operation must be thoroughly carried out, as we are necessarily dealing with an open wound of the intestine. Therefore all instruments which come in contact with the seat of operation must be thrown aside at once, and not used again. Thus the knife which is employed to make the circular incision through the serous coat, and the scissors used to amputate the appendix, naturally become infected, and must be discarded at once. A serious mistake is often made from an antiseptic standpoint in operations of this character by using the same sponge several times on the seat of operation. This habit undoubtedly spreads infection and often causes postoperative complications which can easily be avoided. A sponge which has been pressed once against the tissues should be discarded and not used again. If this is not done the pathogenic germs which adhere to the sponge will be scattered over the uninfected areas surrounding the field of operation. In an aseptic field this precaution is, of course, unnecessary, but when as in an appendicectomy the sponge comes in contact with the contents of the intestinal canal, it is obviously a dangerous practice, and one which must result in jeopardy to the life of the patient.

Variation in the Technic.—If for any reason a purse-string suture can not be used to close the opening in the colon, a Lembert or a Cushing suture may be substituted. The first six steps of the operation are the same as described above, and after amputating the appendix the surgeon then grasps the upper control ligature about an inch from the bowel with the fingers of his left hand to steady the field of operation while the wound is being closed. The sutures are introduced with a small, full curved intestinal needle, which must be held in the grasp of a needle-holder or a hemostatic forceps.

6. Cervical Adenitis.—Bulkeley points out that many cases of cervical adenitis occur in which the importance of avoiding

or minimizing the scar is imperative and ordinary measures not advisable. In such cases aspiration or the use of a seton, or both, may prove successful. In case of tuberculous glands, such measures might also be successful, but there are some dangers. When such glands do not subside under medical treatment, excision done with extreme care and reasonably early is the elective method. Neither aspiration nor the use of a seton should be resorted to in such cases involving the deep cervical glands.

Medical Record, New York.

February 27.

8 *The Surgical Treatment of Facial Palsy, with the Technic of Facio-hypoglossal Nerve Anastomosis. Alfred S. Taylor and L. Pierce Clark.
9 *Questions of Urinalysis Bearing on the Diagnosis of Contracted Kidney. Beverley Robinson.
10 *The Hot Full Bath. Friedrich Grosse.
11 *The Ordinary "X" and Ultraviolet Rays in the Treatment of Tuberculosis. J. B. Ransom.
12 *Antistreptococcus Serum in Pernicious Anemia. James J. Walsh.
13 Hematoma of the Sternocleidomastoid Muscle: A Study of Three Cases. Theron W. Kilmer.

8. **The Surgery of Facial Palsy.**—The surgical treatment of facial palsy by facio-hypoglossal nerve anastomosis is described and discussed by Taylor and Clark. The operation is given in detail, with illustrations, which make it very intelligible. The conditions on which the results of operation depend are numerous. The best result follows in traumatic cases, and the least hopeful prospects are in those due to neuritis, especially when suppurative. In interstitial neuritis, it is well to wait a few months for signs of spontaneous recovery. In traumatic cases the anastomosis should be done at once. At the end of three to six months of treatment in non-traumatic cases, the neurologist can decide the propriety of operating. The degree of atrophy of the muscle is also an important indication; the more atrophy the less hope, therefore the advantage of the use of massage, electricity, etc., from the beginning to keep the muscles in good condition. The technic of the operation must be precise and delicate. The nerves must not be pinched or unduly handled, and the sutures must be fine and involve only the nerve sheaths. Asepsis is imperative, with the least possible amount of scar tissue. The after-treatment is important. The first degree of recovery consists in symmetry of the face during quiescence, without control of the muscles. The next degree consists in the return of volitional control, and the third degree in the return of emotional control. The authors remark on the physiologic association of the two centers of the hypoglossal and facial nerves, as shown in the frequent affection of both in disease. They favor this anastomosis especially on this account. They do not advise complete division of the hypoglossal, but would extend the facial laterally into it, though complete end-to-end nerve regeneration is most active and satisfactory. It, however, entails a permanent paralysis and atrophy of the muscles supplied by the hypoglossal, and they, therefore, do not advise it.

9. **Contracted Kidney.**—Robinson holds that in certain instances uranalysis alone will not enable us to make an exact diagnosis, and we should always consider other clinical signs and symptoms. In contracted kidney complicating acute disease, the outlook sometimes seems serious as far as the urinary symptoms indicate, but he thinks the prognosis is not invariably very threatening from a renal standpoint in spite of this fact. He has verified this very recently in a case of typhoid fever. The low output of urea may occur to an excessive degree at times, not necessarily to be followed by any manifestations of grave importance. It may, indeed, be compatible with many years of life if carefully and judiciously watched and treated.

10. **The Hot Full Bath.**—The hot full bath is here defined by Grosse as a bath above 100 or 102 F. It should cover the whole body to the jugular fossa, and the temperature should be 107 to 108. The patient should enter it slowly so that one or two minutes elapse before he is fully immersed. He should make no unnecessary movements to increase the sensation of heat, and Grosse does not favor the long duration bath. He has never given it higher than 108 or extended the time beyond eight minutes. There is no danger of catching cold after this bath so long as the patient returns within a quarter to half hour to shelter where he can not catch cold. The diuresis is increased. There is anemia of the internal parts with dilation of the arterioles. The heart action is accelerated. When the duration is short, the bath acts as a stimulant to the heart, but if too long continued, it may induce heart failure. Its action is based: 1, On powerful stimulation of the entire nervous system for a brief period; 2, an intense revulsion of circulation tending to hyperemesize the skin and unburden inner organs; 3, a perspiration more abundant than after any other form of bath; 4, a raising of metabolism, and 5, the creation of a sometimes valuable leucocytosis. It is indicated, therefore, whenever we want to incite energetically the metabolism or create a "curative fever," and when there are toxic substances to be eliminated by a perspiration and we wish to remove exudations and stagnations in the internal organs, and lastly, when we wish to energetically incite the entire vital cell activity. It is contraindicated in myocarditis, heart disease, marasmus, when there are fetid masses in the intestines, in case of pus collection anywhere in the body, and whenever, by thickening of the secretions, pus could be retained, as in otitis media, epididymitis, etc., and in all highly febrile conditions. As special indications, he mentions all maladies of the upper air passages, lung troubles, rheumatic diseases and all forms of climacteric troubles, syphilis, some ophthalmic disorders, neuritis and neuralgia. While some authorities consider the hot bath contraindicated in central nervous disease, some more recent neurologists have shown good effects, as in myelitis lumbodorsalis, hemiplegia, progressive pseudoparalysis, etc. Once in a case of locomotor ataxia he advised it, and had trouble in stopping the treatment, as the patient was inclined to overdo. It has also been recommended in some of the infectious diseases, in incipient influenza, infantile convulsions, colics, etc. He suggests the name "Baelz" for the bath, as corresponding with the terms Brand bath and the Ziemssen bath.

11. **Tuberculosis.**—Ransom claims that the *x*-ray is one of the most efficient therapeutic agencies for deep-seated pulmonary lesions, though he cautions against its employment in recent hemorrhagic cases. The precise manner of action is not known, but it is inhibitive to bacterial life and growth. A number of cases are reported.

12. **Pernicious Anemia.**—Basing his action on the theory of Hunter that pernicious anemia was started by infection from carious teeth and the reports of treatment with antistreptococcic serum, Walsh has tried serum treatment in one case without any satisfactory results. He therefore condemns it, holding that there is no possibility for determining the specific type of streptococcus that is indicated. Its success in septic disorders has been very poor excepting in rare instances.

Medical News, New York.

February 27.

14 *The Economic Value of Medical Science. W. Gilman Thompson.
15 *Etiology of Rachitis. P. Wm. Nathan.
16 *Splint for Treatment of Fracture of the Inferior Maxilla. Clinton B. Knapp.
17 *Thrush. H. Illoway.
18 *Internal Treatment of Diseases of the Bladder. Louis Stern.
19 *Chloroform in Labor. Edwin Ricketts.

14. **The Economic Value of Medical Science.**—Thompson points out the economic advantages that have ensued from advances in medical science, as shown in the better sanitation, the prolongation of life, the increase of its comforts, etc. He thinks the physician should do still more, and that a section might be organized on medical economics and medical sociology in some medical societies. The physician should take a greater interest and participation in public matters.

15. **Rachitis.**—Nathan discusses the theories in regard to rachitis, and especially those based on deficient chlorid of sodium and lack of calcium in the food. He has been able to test the question of the lack of calcium in cases in which he administered salt and phosphate of calcium regularly with-

out specially beneficial effects. From an analysis of a large number of cases treated with monocalcic phosphates as compared with those treated otherwise, he thinks we can conclude that a deficiency in quantity or faulty absorption is not the cause of rachitis. Some anomaly of metabolism, which, besides causing other abnormalities, is inimical to the normal calcification of bone, must form the starting point in our search for the cause of rachitis. How this is induced is difficult to explain, and will be until we have a better understanding of it than we have at present.

16. **Fracture of the Lower Jaw.**—Knapp describes a splint formed by a sort of tin cap over the head, with a gutter in front and above the eye, by means of which the lower jaw can be bandaged in such a way as to give tension upward and forward as is sometimes required. A bandage is passed under the jaw over the gutter in front, giving tension in the proper direction. This splint is easily made, light, and easy of application.

17. **Thrush.**—Illoway points out that this disorder is due to uncleanliness on the part of the nurse or parent, the *Oidium albicans* being readily introduced, and it rapidly propagates in children's mouths. The treatment of the milder forms is easy with hyposulphite or borax, but in the severer forms he has had the best results with a mixture of tincture of iodin and glycerin, ½ dram of the former to 3½ of the latter, applied locally to the parts with a camel's hair pencil. Two cases are reported. He thinks the glycerin is an important factor in the treatment. It loosens up the mycelium and makes its removal sure. This plan, he thinks, surpasses any that has heretofore been recommended in its readiness of application and in its harmlessness and rapidity of action.

18. **Bladder Diseases.**—Stern finds that in certain cases of bladder disease where the urine is strongly ammoniacal, urotropin is not decomposed, and hence does not yield up its formaldehyd. He has, therefore, used a new derivative of hexamethylene tetramin, known as helmitol or hexamethylenetetramin anhydromethylene citrate, which has important advantages, being not only less irritating, but more uniform in its action, the reaction of the urine having no effect on its sterilizing action, while it has some pain-relieving quality. Seven cases are reported of its use.

19. **Chloroform in Labor.**—Ricketts advocates the use of chloroform, a few drops on a handkerchief, held so that the patient inhales the vapor, but not allowing it to touch the face, and making sure that the patient has alternating intervals of air alone, to be followed by chloroform mixed with air. The face should not be obscured from the physician. Pulmonary tuberculosis, heart lesions, diabetes and albuminuria are not contraindications. The tendency is to use altogether too much. The patient should inhale in a shallow manner; deep inspiration is seldom necessary.

New York Medical Journal.

February 27.

20 Tertiary Syphilis of the Nose and Pharynx. W. Scott Renner.
21 *Some Points in the Care and Use of the Static Machine. Thomas W. Brockbank.
22 *Thrombosis of the Cavernous Sinus; with a Report of Three Cases. Henry Roth.
23 *Necessity of a Reliable Sign of Complete Anesthesia. Charles S. White.
24 *Frontal Sinusitis and Ophthalmoplegia Interna Partialis. H. Manning Fish.
25 *Use of Formaldehyd as a Preservative in Urine. Frank W. Kenney.
26 *The Comparative Digestibility of Raw, Pasteurized and Sterilized Milk. T. M. Price.

21. **The Static Machine.**—The failure of the static machine in the hands of many physicians is accounted for, according to Brockbank, by the neglect to prevent dampness within the machine. The material he has found best adapted to prevent such interference is fused chlorid of lime, which, however, must be freed from its water of crystallization by thorough baking and then transferred immediately to within the case of the machine. He has seen machines from which the slightest current could not be obtained treated as above described and working perfectly within less than an hour. Another point of importance is to keep all the metal parts clean and brightly polished. The platform should also be clean and have solid glass legs. The ordinary wooden ones with glass foundations are not sufficient, and cause great loss of current. These legs should be kept free from dust, which is liable to act as a conductor for the current, as he illustrates by an instance in his practice. Another thing that affects the efficacy is the imperfect grounding which should be perfect for both poles and also for the electrodes. The dropping of a brass chain from the indifferent pole to the floor is a very inefficient method. He connects his poles with a gas pipe, and for grounding the electrodes he carries a wire to the external water pipe, and in this way has a perfect system of grounding with far better therapeutic results.

22. **Thrombosis of the Cavernous Sinus.**—Roth reports three cases starting from trivial infections; in the first case from a carious tooth, in the second, from furuncle of the nose, and in the third, from one of the upper lip. These illustrate the danger of infectious lesions about the face and the great importance of prophylaxis in treatment. He describes the symptoms, such as high temperature with remissions, chills, profuse perspiration, usually rapid pulse and evidence of dissemination of septic emboli. Headache is an early and prominent symptom. Vomiting occurs from cerebral irritation, and convulsions occurred in one of the cases. The delirium is followed by gradual stupor. The characteristic symptoms and signs of cavernous sinus thrombosis are the results of stasis in the ophthalmic vein and its branches and pathognomonic eye symptoms. Swelling of the eyelids and edema of the skin are the first indications. Bulging of the eye develops soon after, and pressure on the motor nerves gives rise to diplopia. Immobility, photophobia and pain may be present. The pupil is at first small and later fully dilated. All these symptoms are at first unilateral, but gradually spread to the other eye. The treatment seems to be generally unsatisfactory. When the eye symptoms appear the patient is generally profoundly septic. The various operations to relieve the cellulitis and orbital condition that have been suggested have had apparently small results.

23. **Anesthesia.**—White points out the failure of signs of complete anesthesia. The pupil symptoms are not reliable, and the stretching of the sphincter ani is for obvious reasons not applicable in all cases. If deeply anesthetized, the patient remains quiet and breathes naturally, and this seems the most constant sign of all, but is not infallible. Anesthetists need a sign on which they can rely more thoroughly than on those possessed by them at present.

24. **Frontal Sinusitis and Ophthalmoplegia.**—Five cases are reported by Fish illustrating the fact that the most constant symptom of frontal sinusitis is eyestrain or asthenopia consequent to an accommodation paresis. He notes further the fact that internal partial ophthalmoplegia, coming on suddenly, appearing at different intervals and of variable degrees in an emmetropic eye, or one made so by correction, and not otherwise attributable, is very suggestive of sinus involvement, as illustrated in these cases.

25. **Formaldehyd in the Urine.**—Kenney notices the fact that formaldehyd is frequently used as a preservative of urine, and the further fact that it causes, with the Heller test, a reaction analogous to that of albuminuria. He concludes from his study of the subject that it is not advisable to utilize formaldehyd as an artificial ingredient in the urine, as it will help to mislead in making urinalysis. It makes the urine appear albuminous when it is negative, and a typical reaction is not obtained when albumin is present. The reliability of Introna's test (described in THE JOURNAL November 14, namely, the use of formaldehyd in albuminous urine as a reagent), is to be questioned, since the effect of formaldehyd on negative urine is the same, though to a more marked degree, than that on albumin in solution, the difference in the color and density of the precipitate being, as Kenney remarks, immaterial. The therapeutic use of urotropin as a causal factor of possible pseudo-albuminuria is a subject he thinks worthy of study.

26. **Milk.**—Price has experimented on calves with raw, pasteurized and sterilized milk. The results were, with one

exception, highly in favor of the raw milk. The use of sterile milk, excepting in one calf, made it impossible to obtain the feces for analysis, scouring being produced. This was retested on 6 calves, 6 others being used as controls with the raw milk; all 6 were thoroughly scoured out by the sterilized milk. This seems to be a little contrary to the usual prevailing ideas, as sterilized milk has been supposed to cause constipation and has been advocated as a cure for diarrhea in calves. He thinks that anything that would make milk harmful and less digestible in the calf, should certainly be looked on with suspicion before it is given to an infant, notwithstanding the wide difference in the digestive organs of the two.

Cincinnati Lancet-Clinic.

February 27.

27 Causes, Symptoms, Prognosis and Cases of Accidental Hemorrhage. Magnus A. Tate.
28 The Necessity of Medical Organization. C. T. Hendershot.
29 Case of Septic Cysto-pyelo-nephritis, Postpartum. Robert W. Stewart.

St. Louis Medical Review.

February 27.

30 Presentation of Specimens from a Case of Gunshot Wounds of the Intestines, Showing Result Obtained in End-to-end Anastomosis with Murphy Button and Connell Suture. Walter C. G. Kirchner.
31 My Autobiography and Reminiscences. (Continued.) S. Pollak.

The Laryngoscope, St. Louis.

February.

32 *Suppuration of the Maxillary Antrum: with Special Reference to Diagnosis and Treatment. Herbert Tilley.
33 *Alarming Hemorrhage Following Tonsillotomy: Its Cause and Cure. Harmon Smith.

32. **Suppuration of the Maxillary Antrum.**—Tilley's article is a very complete review of the subject in its various aspects. He concludes that in the vast majority of cases there is evidence to show that dental disease acts as an exciting, or at least, a predisposing cause, and that to dentists we should, therefore, look for the prevention which is better than cure. The diagnosis can be greatly assisted by trans-illumination, and can be rendered absolutely certain by intranasal puncture which sacrifices no tooth, is easy and almost painlessly performed. The treatment resolves itself into two methods: 1. Alveolar drainage which may cure comparatively recent cases, occasionally chronic ones, and give relief in any, and the radical operation which can be called on to cure all cases in which other methods have failed.

33. **Hemorrhage After Tonsillotomy.**—Smith has collected all the cases of dangerous hemorrhage in the literature, including three of his own, a total of 54, with 6 deaths. He summarizes them all, with his own experience. He has much faith in the tonsillar hemostat of Mikulicz-Stoerk, and has found it almost absolutely necessary in certain cases where he has employed it. It is not always easy to apply it properly. Too much pressure long continued may cause sloughing, but it is a sure means of controlling hemorrhage when it occurs.

California State Journal of Medicine, San Francisco.

February.

34 *Traumatic Neuroses. H. G. Brainerd.
35 Peritoneal Adhesions, Their Symptomatology, Pathology and Prevention. (Concluded.) E. E. Kelly.
36 Cases of Tuberculosis of the Genito-urinary Tract, with Remarks. (Concluded.) George Chismore.
37 *Occipito-posterior Positions. Geo. L. Cole.
38 Was It a Case of Meningeal Hemorrhage, Hysteria or Malingering? H. J. B. Wright.
39 Grawitz Tumor of Kidney. (To be continued.) E. O. Jellinek.
40 Necessity for the Systematic Annual Examination of School Children's Eyes, Ears, Noses and Throats by School Teachers. Including a Reply to Prof. Leslie's Leaflet. (To be continued.) Frank Allport.
41 *Vasectomy. An Argument for Its Therapeutic Use in Certain Mental Diseases and as a Means of Diminishing Crime and the Number of Criminals. C. N. Ellinwood.

34. **Traumatic Neuroses.**—Brainerd reports two cases in neither of which was there any medicolegal complications, and in which there was no previous history of hysteria and neuroses and no severe concussion. They were cases of pure traumatic neuroses in which neither the advice nor solicitude of the physician nor the suggestions of friends or attorneys had anything to do with the illness. There was no alarm before the injury and no mental shock. The trauma was the exciting cause in both cases, and the same conditions may hold good in other cases, even if there is litigation connected with them.

37. **Occipitoposterior Positions.**—Cole concludes that occipitoposterior positions are tedious and painful and among the most disagreeable obstetric complications. Early diagnosis is desirable, and there is often a question as to the best method of meeting the disorder. Plenty of time should be given before the use of forceps; in using the latter, traction should be made with the handles as low as possible and pressure on the head be frequently released. The perineum is frequently partially or completely lacerated, and should be repaired at once. He quotes authorities freely in regard to the matter.

41. **Vasectomy.**—This procedure is advocated by Ellinwood as a regular operation in imbeciles, maniacs and criminals. He thinks it is free from the after-effects of castration, such as mental depression and hypochondria, and is less repulsive to the patient and is equally effective. He reports a case in which it was followed by marked benefit in a youth with maniacal tendencies under sexual excitement.

St. Paul Medical Journal.

February.

42 *Chronic Ulcer of the Stomach and Duodenum from a Surgical Standpoint. With Some Remarks on Gastric Cancer. William J. Mayo.
43 Notes on the Requirements of Modern Hospital Architecture. Arthur B. Ancker.
44 *Drainage in Surgery. James E. Moore.
45 London Charities. J. E. Engstad.

42. **Gastric Ulcer.**—Almost all questions in regard to ulcer of the stomach are in dispute, according to Mayo. The statistics are divergent, and the frequency as reported is very much greater in some countries than in others. The proportion in the sexes is reported variously. Mayo's experience is that large irregular ulcer is more common in adult males, and that seems to be the general observation. Small ulcer, on the other hand, has been more common in women. He divides gastric and duodenal ulcer into four groups: 1. Mucous erosions involving the superficial epithelium; 2, round and fissure ulcers penetrating through the submucous coat, but not involving the muscular and peritoneal coverings except in perforative cases; 3, chronic irregular ulcers involving all the coats and showing evidences of cicatrization in parts; 4, benign obstructions of inflammatory origin. The last group is based on a complication, but can not always be clearly traced to the other known varieties of ulcer. The symptoms of acute perforation and hemorrhage are well known; attacks of pain in case of a duodenal ulcer are often more severe than those of gastric ulcer. Gastric tetany is somewhat rare, but more common than has been thought. As to laboratory methods of diagnosis, excess of hydrochloric acid is the only one that has been found reliable, and this only as corroboratory. Mayo would dilate the stomach, for diagnostic purposes, in cases of pyloric obstruction, simply with air. The tartaric acid and soda method is dangerous. The best practical test for the loss of motility is the findings of remnants of food in the stomach on using the stomach tube before breakfast. The prognosis has been much discussed. The number of cases reported as cured by medical treatment needs some reservations; it is the old story of appendicitis over again, each acute attack a medical cure. The development of cancer on chronic ulcer is a risk, which has of later years become better realized. Atonic dilatation in neurasthenic individuals is mentioned incidentally by Mayo as being sometimes mistaken for organic disease. The indications for the surgical treatment of gastric ulcer are twofold: first, the question of the ulcer itself, and second, the relief of the complicating dilatation, adhesions, etc. Gastro-enterostomy has the widest application, but excision of the ulcer, pylorectomy and pyloroplasty have each a limited field of usefulness, while in hourglass contractions, gastrogastrostomy combined with gastro-enterostomy is necessary to establish a cure. Excision of the ulcer has its disadvantages. He thinks, however, that the radical procedure of Rodman will be indicated in an increasing number of cases, that is, complete excision of the ulcer-bearing area to be fol-

lowed by independent gastrojejunostomy. This last is the operation of choice, and in Mayo's opinion is best done by the posterior method. All the methods used—Murphy's, the McGraw ligature, Finney's method—he has employed to advantage. In a general way, the anterior method gives a slightly smaller mortality, but a larger percentage of reoperative cases; the posterior method gives the best permanent results, with slightly greater risk. In conclusion, he mentions cancer of the stomach, and remarks that he and his brother have operated on 135 cases in which 34 were radical extirpations. Of the 28 who recovered, the average length of life was over a year. He thinks that in a few years cancer of the stomach will give as good results after excision as breast operations.

44. **Drainage in Surgery.**—Moore speaks of cases where drainage is necessary, especially in abdominal surgery. Pelvic surgery rarely requires drainage, but when needed, it is best carried out through the vagina. Gauze is the material of choice, except when there is a large accumulation of pus, and a rubber tube may occasionally be required. In operations for appendicitis during the attrack, drainage is always necessary except in the very early stages. He insists on the importance of covering the gauze drain with rubber tissue to avoid adhesions. Many patients have been infected from points where adherent gauze had been removed. He is still in doubt as to drainage in appendicitis in the borderland between the early and late period, where there is a cloudy serum almost indistinguishable from pus and abundant evidence of inflammation outside the appendix. Some surgeons advocate thorough cleansing and closure without drainage in these cases. Moore still employs the cigarette drain, for he has seen patients die from the lack of it. Drainage is necessary in cholecystostomy, and in cholecystectomy he feels safer to use a cigarette drain because the conditions are not so favorable to healing as in chronic appendicitis where he never drains.

Cleveland Medical Journal.

February.

46 *Same as 42 above.
47 *The Importance of the Etiologic Factor in the Treatment of Cystitis. William E. Lower.
48 Some Anomalous Cases of Gastric Disease. John Dudley Dunham.
49 *The Association of Disease of the Tube and Ovary with Appendicitis. Robert H. Sunkle.

46. See abstract 42 above.

47. **Cystitis.**—Lower finds that the causes of cystitis are multiple, and the treatment depends on the cause. The steel sound is of little use as a diagnostic measure in bladder diseases. The cystoscope is the most reliable.

49. **Appendicitis and Adnexal Diseases.**—Sunkle reports three cases illustrating the importance of careful examination of the vermiform appendix in all operations involving the tubes and ovaries. The removal of the diseased appendix gives the best chance for complete recovery, saves suffering and further risk and the possibility of future operation. It is not enough to break up the adhesions around the appendix as they may set up disease later. He believes the day is approaching when the appendix will be removed as a routine prophylactic measure whenever the abdomen is opened for any cause.

Annals of Surgery, Philadelphia.

February.

50 *Treatment by Direct Dilatation of Cicatricial Esophageal Stricture. Joseph R. Eastman.
51 *Diverticula of the Esophagus. With the Report of a Case. Albert E. Halstead.
52 *On Bronchoscopy, with Report of a Case in which a Foreign Body was Removed from the Right Lower Lobe of a Lung Through a Bronchoscope. Arnold Schwyzer.
53 *The Mixed Tumors of the Salivary Glands. (Continued.) Francis C. Wood.
54 Operative Removal of a Tumor of the Liver. Report of a Case of Resection of the Liver for Gumma; Cholecystectomy. Herman A. Haubold.
55 *The Aponeuroses the Supporting Structures of the Abdominal Wall; Their Approximation for the Prevention and Cure of Hernia. Kenelm Winslow.
56 Fibrinous Vesical Concretions. Report of a Case in which Two Large Fibrinous Concretions Were Removed from the Urinary Bladder. John W. Elliot.
57 Partial Enterocele. Lucius W. Hotchkiss.
58 Perforation of the Urinary Bladder by an Appendiceal Abscess. I. S. Stone.

50. **Stricture of the Esophagus.**—The condition of stricture of the esophagus is dealt with by Eastman, who advocates the use of a flexible, hollow, spiral wound wire bougie with a thin lead core for progressive dilatation. He illustrates the instrument and its method of use. He finds that by this method of gradual dilatation many cases can be cured. The swallowing of weak cocain or adrenal solution will usually facilitate the introduction of any esophageal sound, relieve nausea and prevent peristaltic efforts which may interfere with the passage of the sound. He finds it more advantageous to enter the esophagus with the head of the patient tilted forward instead of backward, as the tissues of the neck are more relaxed in the latter position. Not every variety of esophageal stricture is amenable to this method of treatment, but he thinks it is doubtful whether the sound is not useful at some time in every case of cicatricial stricture.

51. **Diverticula of the Esophagus.**—Halstead gives a full account of esophageal diverticula, classifying them according to their origin as to traction and pressure and traction-pressure forms, and by their situation, as those at the pharynx, those at the pharyngo-esophageal junction, the border-line cases; those occurring near the middle third of the esophagus, the epibronchial group of Leutgert, and the deep-seated diverticula in which the origin is below the level of the left bronchus, the so-called epiphrenal diverticula. The first group are mostly found on the lateral wall of the pharynx, rarely posterior. Most of the lateral ones are congenital, probably originating from the remains of the third and fourth branchial clefts. Congenital stenosis of the esophagus may be the cause of diverticula, as also trauma and excessive pressure within the pharynx. The symptoms of lateral pharyngeal are on the whole similar to those of pulsion diverticula of the esophagus. Pharyngo-esophageal pulsion diverticula are the most common. They develop exclusively in the median line posteriorly. The etiology of many of these is not clear. Their point of origin is just below the inferior constrictor, the point of least resistance in the muscle fibers. A number of illustrative cases are referred to, as well as those at other localities in the esophagus. The symptoms are usually those of gradually increasing stenosis, generally in later life. The pressure symptoms of an overloaded diverticulum are often prominent; pain after eating, interference with respiration, of the nervous apparatus adjoining, etc. The diagnosis is based mostly on the clinical history, the subjective symptoms and the evidence obtained from the use of a sound. The skiagraph may be sometimes used to advantage by filling the diverticulum with bismuth mixture or by introducing a metal sound or rubber tube filled with shot. In high up cases the esophagoscope is of use. Rumpel's method of using two stomach tubes is also noted. Palliative treatment consists in the persistent use of the sound and stomach tube; the palliative operation of gastrostomy is indicated only when radical measures are impossible. The radical operation consists in removal of the sac, and he reports a case in which this was done, using a purse-string suture of catgut around the neck with the sound in the sac. The sound was then withdrawn and the sac inverted, and at the same time invaginated into the lumen of the esophagus. The purse-string suture was then tied and three sutures of catgut were passed through the neck of the inverted sac. The result was good. His patient was a man of 76, and the diverticulum was reached through an incision from the angle of the jaw to the sternoclavicular articulation.

52. **Bronchoscopy.**—Schwyzer describes the bronchoscope of Killian and the technic of its use, reporting instructive cases. The illustrations show how far the bronchoscope and forceps were inserted into the bronchus. He thinks the method a splendid help in some cases of foreign bodies.

53. **Mixed Tumors of the Salivary Glands.**—Wood finishes his paper in this issue. His conclusions are given as follows:

1. There is a group of extremely complicated tumors occurring in the facial region which contain elements from both epi- and meso-blast in most intimate relation to each other. 2. The complicated structure of the stroma, containing as it does elements such as embryonic connective tissue, cartilage, bone, fat and lymphoid tissue, and very rarely striated muscle, is explained most

easily by the assumption of an embryonic misplacement of mesoblast. 3. The structure of the parenchyma is so slightly characteristic in morphology that its epithelial nature in all cases can only be considered as probable; yet in about 24 per cent. of the tumors examined the presence of epithelium is undoubted. The form and relationships of the cells of the parenchyma do not furnish sufficient data to justify these cells being regarded as of endothelial origin. 4. The theory of early embryonic displacement of epiblastic tissue during the process of formation of the parotid and submaxillary glands and the branchial arches may account for many of the morphologic peculiarities of the cells of these tumors, especially the lack of many typical features which we associate with epithelium. The same condition may be seen in the epithelial cells of the congenital moles, in which the epithelium is with difficulty distinguished from connective-tissue cells, owing to its close connection with the stroma of the tumors and its undifferentiated type. 5. The mixed tumors of the salivary glands run a clinical course, strikingly different from the sarcomata and carcinomata, in that they are slow growing and generally benign. The regional lymph nodes are not invaded, and recurrences are likely to remain local in a considerable proportion of the cases.

The paper ends with an apparently complete bibliography since 1896.

55. **Abdominal Aponeuroses.**—The important conclusions deduced by Winslow are that the aponeurosis coverings are the chief supporting structures of the abdominal wall; that their approximation by overlapping, in doubling the strength of the aponeurotic layers, doubles the strength of the abdominal incision. This being so, and the overlapping method proving the best method of curing abdominal hernia, it follows that as prevention is better than cure, it is wise to prevent hernia by applying this principle in closing all abdominal incisions. He illustrates the technic.

Annals of Ophthalmology, St. Louis.

January.

59 *Sympathetic Ophthalmia. A. Maitland Ramsay.
60 *The Visual Requirements of Engine Men, Based on Personal Observations from an Engine Cab. H. B. Young.
61 *Influence of Resection of the Cervical Sympathetic Ganglia in Glaucoma. William H. Wilder.
62 Arteriosclerosis and Its Bearing on Certain Lesions of the Retina and Optic Nerve. Charles S. Bull.
63 A Case of Microphthalmos with Orbital Cysts. William Zentmayer. Histologic Study by Harold G. Goldberg.
64 *Blastomycosis of the Ocular Structures, Especially of the Eyelids. Casey A. Wood.

59. **Sympathetic Ophthalmia.**—The pathology and etiology of sympathetic ophthalmia are discussed by Ramsay, who considers that the infection travels by way of the blood stream rather than by the nerves. As regards treatment, he thinks to be most effective it should be prophylactic, and much depends on the manner by which the injured eye has been treated immediately after the accident. In some cases enucleation is unavoidable, and he lays down the following rules: 1. Enucleate at once if the injury is so severe that the exciting eye is destroyed from the beginning. 2. Enucleate at once on the slightest sign of sympathetic irritation if the vision of the exciting eye only equals a perception of light and darkness. 3. Enucleate at once if a foreign body is present and can not be removed from the exciting eye. 4. Enucleate at once when the injured eye is blind and suffering from recurrent acute inflammatory attacks, or when it is tender and irritable as a result of degenerative changes, such as ossification of the choroid. 5. Do *not* enucleate when sympathetic inflammation is in progress and there is still sight in the injured eye, as removal of the exciting eye will then give no benefit, and the probability is that in the end all the sight left will be in the injured eye. He does not favor the substitutes for enucleation that have been suggested, and insists on no operation until all the acute symptoms have subsided. In the beginning we must trust to the ordinary treatment of iridocyclitis. Mercury is the one drug to be relied on, however administered. Its action is intensified by iodid of potassium, which may be given in 10 or 20 grains once a day after meals. The general health must also be attended to. The most that can be hoped for in these cases is that the active symptoms will subside, though in a few cases recovery will follow. If after a year or eighteen months there has been no recurrence of the inflammation and the tension is not diminished and the patient's perception of light is satisfactory, operative interference may be considered, but the iris should be left alone as much as possible. The cataractous lens in these cases should be gotten rid of, and it should be remembered that the vitreous is quite fluid and escapes readily, so the incision should be small. After the operation the eye should be kept bandaged in a dark room, local application of ice used and sedatives internally.

60. **Vision of Railway Men.**—Young has personally investigated the conditions of vision of locomotive engineers and discusses the conditions. He finds some rather paradoxical facts. A lower grade of vision may give better recognition of railway signals than a perfect one. The twinkling, unsteady effect of the effulgent rays, which is exaggerated by the motion of the engine, is in part lost. For semaphore perception the signals ought to be visible for a quarter of a mile, and if the machinery for stopping the train is all right, this ought to be sufficient. The weather, fog, rain and snow produce unfavorable conditions. In snow the brighter the headlight the worse the condition. He thinks that if a smaller parabolic reflector were used, or the light stopped down to a pencil ray through a diaphragm, much of the cloud from reflections from the snow crystals would be dispelled. He favors the use of glasses, holding that if they are prohibited the life of engineers as such will be so short that men will hardly think it worth while to serve the apprenticeship. Examination methods should be as much on the ground as possible, in the yards and along the lines. Tests under unfamiliar conditions should not be given too much prominence. The mental perception of the individual has much to do with the findings. Some persons with perfect vision may be slower in perception than others, and consequently seem more defective. In apprentices normal vision should be required.

61.—See THE JOURNAL of February 6, p. 350.

64. **Blastomycosis of the Eye.**—A number of cases are reported from various sources by Wood, who reviews the literature. He remarks that the diagnosis from carcinoma, tuberculosis and epithelioma may sometimes be a little difficult. It is quite possible that a blastomycetic tumor might be mistaken for a syphiloderm. Its comparatively rapid progress, its soft spongy walls, absence of glandular involvement, etc., are, however, usually sufficiently characteristic, and immediate diagnosis may be made by microscopic examination. For treatment, incision with thorough curetting under anesthesia is best. It may be followed by the *x*-rays and the administration of potassium iodid in gradually increasing doses up to 150 grains, as first practiced by Dr. Bevan and later by Drs. Hyde and Montgomery. Some cases will recover without surgical intervention. When it is refused, the dose of potassium or sodium iodid should be continued for three or four months. Local applications are not of much use. He gives the particulars of 6 published and 2 unpublished cases, in addition to one in his own practice.

Journal of Nervous and Mental Disease, New York.

February.

65 Case of Chronic Internal Hydrocephalus in a Youth. E. E. Southard and W. F. Roberts.
66 *Senile Dementia; a Clinical Study of 200 Cases with Particular Regard to Types of the Disease. William Pickett.
67 Case of Alexia. Philip Zenner.
68 *Reflexes in Long Distance Runners. A Study of the Influence of Fatigue on Certain Reflexes. Philip Coomes Knapp and John J. Thomas.

66. **Senile Dementia.**—Pickett holds senile dementia is a sort of specific entity, the essence of which is a quantitative change—a mental loss; but the more obvious change is frequently qualitative—excitement, depression and delusion simulating one of the pure insanities. The mental loss, he thinks, is the source and spring of the entire disease. He analyzes a number of cases of the different types of this condition which he considers in legal medicine one of the most important forms of insanity.

68. **Reflexes in Long-Distance Runners.**—Knapp and Thomas have studied the reflexes in the competitors in the Marathon run in Boston. The striking points were the proportion of exaggerated reflexes in the knee and "patellar twitch," in the candidates before the run, and the more or less complete abolition of the same after the performance. The explanation of the increase of plantar reflexes is simple, the increased sensibility of the sole from pounding on a hard road. The diminution of tendon reflexes is not so easy. Exhaustion, as a rule, was not so great as might have been expected, and the most

exhausted cases were not always those which showed the greatest changes. Nevertheless the theory of exhaustion of the reflex centers of the cord seems the most plausible explanation.

Ophthalmic Record, Chicago.

January.

69 *Conical Cornea—An Historical Review, Together with a New Non-operative Method of Treatment. L. Webster Fox.
70 Simple Glaucoma in the Young, with a Report of Two Cases. C. A. Veasey and E. A. Shumway.
71 Ophthalmic Memoranda. G. E. de Schweinitz.

69. **Conical Cornea.**—Fox's article is largely a historical review of the literature and the methods of treatment. He notices particularly Nottingham's work with the use of an artificial iris, and is able to report one case in which elaborating the methods of that author he has been able to produce almost normal vision.

Quarterly Journal of Inebriety, Hartford, Conn.

January.

72 *Alcohol in Relation to Mental Disorders. Theo. B. Hyslop.
73 The Psychology of the Inebriate Mother. T. Claye Shaw.
74 *The Bearing of Alcoholic Stimulants in Medical Selection for Life Insurance. A. B. Bisbee.
75 *Tea Inebriety Among Children. Matthias Nicoll, Jr.

72. **Alcohol in Mental Diseases.**—Hyslop discusses the effects of alcohol on the nervous system, especially calling attention to the question of alcohol as a cause of paresis. He does not consider it as more than an exciting cause of this disorder, which he believes to be the result of syphilis in most cases.

74. **Alcohol and Life Insurance.**—Bisbee classifies all applicants for insurance as follows: The man who is and always has been a total abstainer; 2, the man, a total abstainer at the present, who has been a drinker; 3, the moderate drinker; 4, the man who is ordinarily temperate, but two or three times a year on special occasions gets intoxicated; 5, the man who has violent outbreaks of intemperance lasting a few days or weeks and is temperate in the interval; and 6, the chronic, steady drinker to excess. The last three classes can be ruled out; there is no place in insurance at the ordinary rates for them. He divides the moderate drinkers into the really moderate drinker and the immoderate moderate drinker. The second of these is the most important. They are generally sober in appearance, and respected men in society, never get drunk, but take more or less liquor at different times during the day, more than they realize or their friends suspect. Their systems are constantly charged with alcohol, which is sure to cause irreparable damage sooner or later. This is the most dangerous class for any company to write. The line of demarcation between them and the really moderate drinker is hard to define; each case must be studied on its own merits, and a decision can be reached only after considering carefully each individual case. Many intemperate men will receive policies in spite of the greatest care; it is impossible always to ascertain the facts. As regards those in the liquor trade he would favor the wholesale rather than the retail dealers, but liquor dealers as a class are not good subjects for life insurance. Any man connected with the liquor trade should be considered uninsurable at the ordinary rates unless it can be proved that his habits are beyond reproach. The only remaining class is the reformed drinkers, and he thinks the only safe working rule is to regard these as unacceptable unless their reform is of at least five years' standing, and it can be shown by trustworthy evidence that they are total abstainers, that the reform took place before the age of forty, and searching medical examination shows that the constitution has not been appreciably injured by past dissipation.

75. **Tea Inebriety in Children.**—Nicoll calls attention to the habit among the poorer classes of dosing children with tea to an extent hardly imagined by those who are not acquainted with the facts. It is often given as a substitute for milk. Its effects are disastrous and its remedy lies in the education of the parents.

St. Louis Courier of Medicine.

February.

76 *Some Observations and Suggestions Concerning Therapeutics in Infancy and Childhood. E. W. Saunders.
77 Burns: Prognosis and Treatment. Laura H. Branson.

76. **Therapeutics in Infancy and Childhood.**—Aside from the difficulty of administering medicines, the therapeutics of childhood is very satisfactory. The child can not mislead, but a thorough understanding of the physical signs and symptoms is necessary. Saunders remarks that the giving of water to infants in hot weather and in fever is neglected, and that in many ways the child is mishandled through ignorance. He has a high opinion of hydrotherapy in infant therapeutics, especially the spray bath, which he prefers to other forms for the elimination of heat. Rest is also a matter of importance in the treatment of children. Inhalations are not used as much as they might be, as, for example, the use of vapor from lime water for catarrhal affections. As for drugs, he follows Young's rule except for some drugs, such as chloral, quinin, calomel, digitalis and pilocarpin, of which he gives larger doses, and heroin and morphin and the like, of which he gives less or bases his calculation on the minimum adult dose. At one year of age one-twelfth of the adult dose is given. On the basis of a child doubling its weight in the first six months and trebling it in a year, he gives at six months two-thirds of one-twelfth or one-eighteenth, and for still younger children one-third of one-twelfth or one-thirty-sixth. In case of chloral, however, he has frequently given 2 grains at three months, with frequent repetitions. Another drug in which he exceeds the rule is antipyrin, giving 1 grain at six months without hesitancy. It should not be continued long. As eliminants he mentions pilocarpin, which should be given early. It will not have its best effect in high temperatures, which should be first reduced, and it should also be avoided in case of weak heart or embarrassment of respiration. Among the antipyretics he specially mentions the external application of guaiacol, which is a ready means of reducing the temperature in many conditions, and also appears to have an analgesic effect. Other drugs mentioned are phenacetin, camphor and veratrum viride in sthenic fevers, one-fourth to one drop, diluted, every half hour. Among the specifics he first mentions quinin, which is sometimes difficult to give to children. In severe or inveterate malarial infection, Fowler's solution, with antipyrin hypodermatically, has proved effective. He also speaks of argyrol in ophthalmia neonatorum, and adrenalin in hemorrhages, and guaiacol carbonate in catarrhal conditions of the upper air passages, and as an intestinal antiseptic. Serum treatment is briefly mentioned. The practice of vaccinating with vaccine virus in whooping cough, in patients not before vaccinated, is, he thinks, a useful measure in some cases. With the advent of vaccinia the symptoms of pertussis often abate.

Indiana Medical Journal, Indianapolis.

February.

78 Indiana Health and Medical Laws; Legislation That Is Still Needed. William L. Taylor.
79 *Ultra Visible Life. Frederick G. Novy.
80 Historical Sketch of the City Hospital. G. V. Woollen.
81 Public Hospital as an Institution for Investigation and Instruction. Lehman H. Dunning.
82 The Hospital as an Institution for Investigation and Instruction. Louis Burckhardt.
83 Report on Tuberculosis Exposition Held Under the Auspices of the Tuberculosis Commission of Maryland in Baltimore. John N. Hurty.

79. **Ultra-Visible Life.**—Novy reviews the infections of which the germs have not yet been detected, and which are beyond the reach of our optical apparatus. One-fifth of a micron is at present about the limit, or 1/125,000 of an inch. Evidence that still further divided material endowed with life may exist is shown by the facts of certain diseases, such as the so-called mosaic disease of the leaves of the tobacco plant, rabies, yellow fever, horse sickness of South Africa, rinderpest, sheep-pox, molluscum contagiosum of birds, the germs of which all pass through the Berkefeld filter. He says we know at the present time of at least ten diseases in which the cause falls within the group of filterable organisms. The question presents itself: "Is it a small stage of an otherwise large organism which passes through, or is the cause filterable in all its stages of development? In the latter case we are clearly dealing with an ultra-visible organism, unless indeed the virus should chance to be

dialyzable, in which event we would have the as yet purely hypothetical form of 'soluble life.'" The existence of a minute stage of some organism is illustrated by the trypanosoma of rats, which has a length of seven or eight times that of the diameter of the red blood cell, but a very minute form was produced in artificial culture and the material passed through a Berkefeld filter, and the filtrate reproduced the typical disease with ordinary large forms. He remarks on the difficulty of cultivating protozoa. Bacteria, like weeds, grow anywhere, but protozoa are exceedingly susceptible to their surroundings and changes in osmotic pressure cause them to disappear or undergo marked alteration.

University of Pennsylvania Medical Bulletin, Philadelphia.

January.

84 *The Specificity of Tissue Coagulins, Especially of Invertebrates. Leo Loeb.
85 Case of Extensive Arteriosclerosis Simulating Aneurism of the Arch of the Aorta. John M. Swan.
86 Concerning the Fothergill Pictures at the Pennsylvania Hospital. J. A. Scott.
87 Military Services of the First Faculty of the University of Pennsylvania. Francis R. Packard.
88 Oration Delivered by Dr. W. P. C. Barton in 1821. With Explanatory Note. William Pepper.

84. **Specific Coagulins.**—Loeb describes the specific character of tissue coagulins, each being effective on its own species and to a less extent or not at all in others. He considers that we have a fact of wide significance in this specificity. It does not, of course, apply to all ferment actions, especially not to the common hydrolytic ferments of the digestive organs. Nothing can be said as to the mode of origin of these specific substances. He suggests, however, that they may originate as do the experimentally produced antitoxins and agglutinins, by a kind of autoimmunization, a certain fibrinogen producing a specific coagulin. These specific coagulins seem to be specially adapted to protecting the individual by preventing hemorrhage in so far as just the kind of muscle with which the blood comes in contact in flowing through the wound has a specific influence on the blood, accelerating its coagulation. The specific action is also of interest in the matter of thrombosis, as thrombosis is known to follow injury of the blood vessel wall.

New Yorker medicinische Monatschrift.

January.

89 Succorrhea and Tetany in Case of Chronic Gastric Ulcer. J. Kaufmann.—Bemerkungen über magensaftfluss und tetanische Anfälle beim chronischen Magengeschwür.
90 Suppuration in Female Pelvis. J. A. Schmitt.—Elterungen innerhalb des weiblichen Beckens.

Alabama Medical Journal, Birmingham.

February.

91 Everyday Preventive Medicine. S. C. Carson.
92 Report of Major Operations at St. Vincent's Hospital. E. M. Robinson.
93 Typhoid Fever. J. S. Winters.
94 Memorial Address on Dr. W. E. B. Davis. Richard Douglass.

Oklahoma Medical News-Journal, Oklahoma City.

February.

95 Malarial Fevers as Seen by the Eye of the General Practitioner. Ira B. Bartle.

Journal of Medicine and Science, Portland, Maine.

February.

96 Quarantine. P. C. Kalloch.

Medical Mirror, St. Louis.

January.

97 Fractures of the Skull. With Report of Clinical Cases. William E. Fitch.
98 The Specialist by Evolution and the Specialist by Premature Selection. Charles M. Hughes.
99 Beriol-ol vs. Salicylate of Methyl. Gus Foullon.
100 Two Specimens Showing Results of Anterior Gastro-enterostomy Made with Suture After the Method of Kocher with the Ligature of McGraw. John Y. Brown.

Dominion Medical Monthly, Toronto.

February.

101 Pulmonary Embolism. R. Eden Walker.
102 Abdominal Contusions. A. E. Bolton.
103 Deductions from the Study of Pelvic Diseases in the Female Insane. Ernest A. Hall.
104 Extrauterine Pregnancy. F. W. Hall.
105 Perineal Prostatectomy. Robert Telford.

Detroit Medical Journal.

February.

106 The Relation of Surgical Pathology to Surgical Diagnosis. Joseph C. Bloodgood.

Old Dominion Journal, Richmond, Va.

February.

107 The Treatment of Puerperal Sepsis. Daniel J. Coleman.
108 Lobar Pneumonia. A. L. Baptist.
109 Treatment of Hip-joint Disease. William P. Mathews.
110 Address. Southern Medical College Association. Christopher Tompkins.
111 Some Observations on the Movability of the Apex of the Heart. W. J. Pettus.

Colorado Medical Journal, Denver.

December.

112 Double Monsters. A Brief Consideration of Their Cause, Characteristics, Diagnosis, Prognosis and Treatment, and a Report of Two Cases. T. Mitchell Burns.
113 The Treatment of Trachoma. G. L. Strader.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

February 20.

1 *Hour-glass Stomach. Berkeley G. A. Moynihan.
2 *Congenital Narrowness of the Pyloric Orifice a Cause of Chronic Gastric Disease in the Adult. A. Ernest Maylard.
3 *The Subsequent History of Eighteen Patients on Whom Gastric Operations Had Been Performed. C. Mansell Moullin.
4 Five Consecutive Cases of Perforated Gastric Ulcer Treated by Excision. Sinclair White.
5 *Aseptic Surgery in Theory and Practice. Charles B. Lockwood.
6 *The Treatment of Appendix Abscess in the Recto-vesical Pouch. Edmund Owen.
7 The Diminishing Birth-rate and What Is Involved by It. Being an Abstract of the Inaugural Address Delivered Before the British Gynecological Society. J. W. Taylor.

1. **Hour-Glass Stomach.**—Moynihan holds that every case of hour-glass stomach is due to ulceration, entirely rejecting the idea that it may be congenital. There may be perigastric adhesions due to ulceration or gallstone disease; chronic ulceration may produce it through adhesions or through contraction induration in its healing, and Moynihan thinks that spasmodic contraction may have considerable influence. The principal aids to diagnosis are in washing out the stomach and its inflation with gas. The two signs of Ewald are of little importance. A number of cases are reported illustrating the condition. As regards treatment, it is purely operative, though in many cases no single operation will suffice. In the cases reported gastroplasty was done alone in 5, gastro-enterostomy alone in 4, gastroplasty and gastro-enterostomy in 2, gastrogastrostomy alone in 1, and gastrogastrostomy and gastroenterostomy in 2. Both parts of the stomach will have to be relieved by operation.

2. **Congenital Narrowness of the Pyloric Orifice.**—In a number of chronic gastric derangements Maylard has found what seems to him evidence to indicate that a congenital condition of the pyloric orifice was the cause of the disorder. He sums up his remarks by saying:

1. There exists a large class of patients in young adult life who owe their chronic gastric trouble to a congenital narrowness of the pyloric orifice. 2. This narrowness is due in many cases to an undue development of the pyloric valve lessening the caliber of the orifice to anything between the normal of 12 to 15 mm., and 2 or 3 mm. 3. The proper treatment is gastrojejunostomy performed with due regard to the normal disposition of the parts after operation.

3. **The Postoperative History of Gastric Cases.**—Moullin has obtained the record of 18 cases which had been operated on for ulcer and carcinoma, and finds points that seem worthy of attention. One of them is concerned with hemorrhage from what are called erosive gastric ulcerations or what he thinks are better described as recurrences. There is no difficulty in arresting the bleeding. The erosion or ulceration may be ligated or it may be excised, and he thinks this has saved life in some cases. He has seen this recurrent ulcer follow gastro-enterostomy. He thinks that whatever the pathologic condition may be it is necessary to distinguish these cases from those of chronic ulceration. In the one the operation is only required when the hemorrhage is dangerous to life. In the other hemorrhage is the indication that ulceration is extending, and a different method of treatment is required from that which it has been receiving. Another point is in regard to adhesions: if they are left when gastro-enterostomy is performed there will always be trouble and pain after eating owing to dragging

on the parietal peritoneum. Simple division is of little or no use, they always re-form. The only way to avoid recurrence is to excise that portion of the stomach wall that is attacked, bringing the cut edges together carefully by means of sutures.

5. **Aseptic Surgery.**—This second lecture of Lockwood's treats of skin disinfection. He has for some years used a mixture of alcohol, water and biniodid of mercury, which he finds most satisfactory. He admits that the question of perfect sterilization is still unsettled, but is inclined to think that practical sterilization of the hands can be performed. His method mentioned above has of late given only 3 septic tests in a total of 111. As regards the use of gloves, he admits that the rubber gloves will suffice, but he has found it impossible to avoid tearing them in operating, and they decidedly dull the sense of touch. If some one could invent gloves which could be sterilized by heat and which would not tear or impair the sense of touch, there would be no objection whatever to their use. The disinfection of the patient's skin is a more difficult matter than that of the surgeon's hands and depends on the region. He would give the regions in their order of most certain disinfection as possible: 1. The limbs; 2, the abdomen; 3, the breast; 4, the neck; 5, the back; 6, the groin and axilla; 7, the scrotum, and 8, the scalp, which is the most difficult. Perhaps when more stringent tests are used the skin will be found septic more frequent than it has been. He makes the remark that wounds in the extremities heal better at a distance from the groin and axilla than nearer to those localities. The methods of skin sterilization, however, are still far from perfect. For buried sutures he thinks there is no better material than twisted silk, and that the peritoneum tolerates them better than any other tissue; the tendons, aponeurosis, ligament nerves and fibrous tissue come next. The muscular tissue is the most intolerant. Carbolic acid silk has a decidedly irritating effect on the skin. A great deal depends on the way the silk is tied. Sterile silk sutures tied tightly in the peritoneum will be tolerated, but this is not the case with muscular tissue. For septic wounds he invariably uses catgut, and it is invaluable for operations about the rectum and perineum. It is also best to use it when the wound is supposed to be tuberculous, and it is advisable to use catgut for the control of hemorrhage in all septic wounds. The difficulty is in making catgut itself absolutely aseptic. As regards silver wire, as recommended by Bloodgood, he has found difficulty in the mechanical irritation which it produces. No matter what trouble was taken to cut the ends of the wire short and turn them down, they altered their position and caused pain. Silver foil, he thinks, is the ideal substance for the exclusion of air and protecting the wounds from gauze. He has continued to use it in conjunction with silk and has been gratified with the results. He favors the use of sponges when they can be made sterile. When a sponge has touched anything infective it should at once be discarded.

6. **Appendix-Abscess in the Rectovesical Pouch.**—The advice given to drain abscess in the rectovesical pouch through the vagina or rectum is criticised by Owen, who maintains that abdominal section in these cases is decidedly the best. There are two serious objections to opening appendiceal abscess through the vagina or rectum; one is that the operator can not tell what he is doing and is operating in the dark, and the second is that the operation may be followed by fecal fistula, which absolutely refuses to close. Another strong point for the abdominal route is the possibility of removing the appendix. He holds that when a person has had one unmistakable attack of appendicitis the appendix had better be resected as soon as the inflammation has quieted down. This is in the line of prophylactic treatment of intrapelvic abscess.

The Lancet, London.

February 20.

8 *The After-effects of Head Injuries. T. Crisp English.
9 The Psychic Side of Therapeutics. J. F. Woods.
10 The Diminishing Birth-rate and What Is Involved by It. John W. Taylor.
11 *The Use of Antistreptococcic Serum in the Treatment of Scarlet Fever and of Diphtheria. F. Percival Mackie.
12 Notes on a Case of Backward Dislocation of the Head of the Humerus Caused by Muscular Action. C. W. Mansell Moullin.
13 Seventy Cases of Lobar Pneumonia; an Analysis of the Clinical Features and Postmortem Changes. F. S. Dawe and E. C. Austin.
14 *Cancer in Australia: A Comparison with Other Countries, Together with a Specific Treatment for the Prevention and Arrest of the Disease. (Concluded.) G. Cooke Adams.
15 Cecal Concretions. Alexander Forsyth.
16 Notes on the Etiology of Lupus and on Cases Treated by the X-rays and Finsen Light. Frank H. Jacob.

8. **Head Injuries.**—Head injuries are common, but very little attention has been paid to their remote consequences. English has collected the notes of 300 patients whose condition was studied some time after injury. The interval between the accidents and the time of investigation varied from one to twenty years. He classifies them under three heads: 1. Those with no effects; 2, those with slight effects; 3, those with marked effects. Under these heads he was able to classify 200 out of the 300 patients, while the remaining 100 were miscellaneous and could not be thus classified. The 200 were studied in two series of 100 each, and slight or marked effects occurred in 69 per cent. of the first series of 100, and 52 per cent. of the second. Twelve patients died, and in only one of these was the death directly due to the head injury, the patient having been in an asylum for six years. In another case it is possible that death was ultimately caused, but the actual cause could not be ascertained. When last seen the patient was suffering from a severe traumatic epilepsy and mental impairment. It was found that the majority of cases that submitted to a necessary period of mental rest after the injury became well. The reason why so many did not is that the treatment was too short. Owing to the inadequate mental rest, recovery is frequently incomplete after skull fracture, so that there is some element of truth in the popular notion that a man is never the same after a head injury. Miscellaneous cases include mild forms of concussion when there is only temporary loss of consciousness. Grave consequences are more likely to occur from these owing to the neglect of any treatment whatever. The effect on the working capacity was specially studied, and in 86 fracture cases information was obtained. Fifty were able to do the same work as before; 15 were doing lighter work; 7 could do very little, and 6 were totally disabled. In 78 cases where there was no apparent fracture, 51 were working as well as before; 12 were a little impaired in their capacity; 6 were doing lighter work; 4 could do but little; 2 had given up their trade, and three were totally disabled. The form of occupation, of course, has its influence and the greater the responsibility and co-ordination, etc., the greater the difficulty. The beneficial effects of head injuries, English says, are almost entirely confined to the imagination of novelists, but he reports a case in which a fall on the head seemed to have a beneficial effect in chorea. He finds that injurious effects are most likely to result during two periods, early life and old age. In children the higher intellectual faculties are being developed and his experience has not borne out the statement that children recover remarkably well from head injuries. In the aged the powers of recuperation are unequal to meet the conditions. He discusses the symptoms, especially traumatic headache, which is commonly observed; also painful or tender scars, vertigo, changes of disposition, especially irritability, which is a common symptom, the inability for mental and physical exertion, disturbed sleep, and an increased susceptibility to the influence of alcohol, which was observed in all cases. Another symptom is the inability to stand high temperature, which is common after head injuries.

11. **Antistreptococcic Serum in Scarlet Fever, Etc.**—Mackie's conclusions are the following:

Antistreptococcic serum is of distinct value in a certain number of cases of scarlet fever, particularly in those where the throat lesion is severe and toxemia is going on. 2. Bacteriologic examination will give no sure guide as to the cases in which the serum will be beneficial, therefore it is advisable to give the serum early and to make the bacteriologic examination afterward. 3. The serum ought to be given early in the disease, just as in diphtheria. The longer the disease has lasted before the serum is used the less likelihood is there that it will be beneficial. Antistreptococcic serum is too often brought in with the strychnin and oxygen when it is unreasonable to expect it to do good. 4. If the first dose or two have no effect on the temperature its continuation will probably not be of any value. 5. The serum is liable to produce urticario-erythematous rashes. 6. Even in those cases in which it does no good there is no evidence to show that it does harm.

The use of the compound sera in diphtheria was tested in 5 cases; 3, however, were almost moribund; 1 died from heart failure in convalescence and 1 recovered almost miraculously, and Mackie is of the opinion that in all cases of diphtheria where there is evidence of streptococcic infection antistreptococcic serum should be given with some reasonable hope that it may do good.

14. Cancer in Australia.—Adams' conclusions from the whole study are as follows:

1. Cancer is not due to a bacterial or parasitic origin. 2. Cancer is a constitutional disease due to a specific or malignant virus originating in the blood and chiefly manifesting itself after 35 years of age, and at its greatest virulence between 50 and 70 years of age. 3. Malignant disease may be congenital and certain forms acquired by infection or contagion. 4. The principal factor in the cause is hereditary tendency. 5. The principal exciting factor is prolonged local irritation acting on a constitution suffering from an inherited tendency or which has been debilitated through want or treatment of one or other of the following diseases in their order of frequency: syphilis, alcoholism, obesity, rheumatism, gout or tuberculous disease. 6. The principal dietetic factors in the cause are sugar, beer and alcohol. 7. The principal hygienic factors in the cause are woods and forests whose dropping foliage decomposing causes stagnation of water; also badly formed streets and defective drainage in cities; and the overcrowding, badly housed and fed population of cities. 8. Cancer is a preventable disease and the absolute cure is only to be found in the means for preventing its exciting causes and completely removing the same. 9. The sanitary indigenous foliage of the following natural orders: (*a*) *Myrtaceæ*, (*b*) *Lauraceæ*, and (*c*) *Coniferæ*, appears to exert a specific influence in rendering the native born population of the countries where they grow almost immune from malignant diseases other than might be caused by prolonged local irritation (the Australian eucalyptus belonging to the *Myrtaceæ* exerts the greatest influence in this direction). 10. A eucalyptus oil obtained by means of a scientific preparation from various species grown in Australia possesses a specific action in arresting the pathologic progress and process of malignant disease. 11. All internal and local treatment of a poisonous or irritating nature should be absolutely avoided, more particularly such local treatment as the *x*-rays and Finsen's light, as they are likely to set up secondary conditions around the site of lesion. Far better is early and prompt removal when the malignant growth is accessible.

My object in writing this article is to throw some further light on the cause of malignant disease and to bring more prominently before the notice of the profession a remedy which, though known in some degree, is, in my experience, insufficiently known and certainly insufficiently appreciated. And while strongly advocating its more general use in the treatment of wounds and specific fevers, etc., it is in relation to its specific effect as applied to the disease of cancer that I would urge the profession to give it a fair trial.

Intercolonial Medical Journal of Australasia, Melbourne.

January 20.

17 *The Congenital Origin of Hernia. R. Hamilton Russell.
18 A Fatal Case of Cyclic Vomiting. Julian Smith.
19 An Unusual Case of Intestinal Obstruction. Basil Killington.
20 *An Attempt to Estimate the Risk of Producing Sympathetic Ophthalmitis by Perforating Injury. James W. Barrett.
21 Fish-bone Extruding Through the Abdomen. W. A. Wood.

17. Hernia.—Russell reiterates his former views as to the congenital origin of oblique inguinal hernia, and there being a patent condition of the whole or a portion of the processus vaginalis in these cases. Congenital weakness of the abdominal wall, he thinks, does not exist as a factor, and when it does occur it is acquired from the existence of hernia. The complete removal of the sac done before the abdominal wall has been much weakened is the true curative treatment and the use of a truss, excepting in the case of very young infants, is improper. He now brings forward further evidence in favor of his views and also some presumptive evidence that femoral and direct inguinal hernia may belong in the same category with the oblique variety. He illustrates his paper with schematic diagrams and proposes instead of the use of the term congenital hernia, a substitution of the terms total funicular and partial funicular for those now called congenital and funicular respectively.

20. Sympathetic Ophthalmitis.—Barrett reviews the figures of various authorities and concludes that, so far as the evidence goes, the risk of sympathetic ophthalmitis occurring in a case of severe injury with iridocyclitis is certainly not less than 5 per cent. and probably considerably more.

Australasian Medical Gazette, Sydney.

January 20.

22 Gallstones and Their Treatment. G. H. Hopkins.
23 Post-operative Hematemesis. W. J. Stewart McKay.
24 Degeneration of Uterine Myomata. Ralph Worrall.
25 A Case of Popliteal Aneurism. H. S. Newland.
26 On Loss of Memory. M. McIntyre Sinclair.
27 Ventro-fixation of Uterus. H. W. Bryant.
28 Notes on Three Cases of Acute Suppurative Peritonitis with Successful Operative Interference. H. Roger Cope.

Journal of Tropical Medicine, London.

February 15.

29 Cold Weather Mosquito Notes from the United Provinces—Northwest India. (Continued.) G. M. Giles.
30 Brief Conapectus of the Tropical Diseases Common in the Highlands of West Central Africa. Frederick C. Wellman.
31 Keratitis. Wm. Robertson.

Bulletin de l'Académie de Médecine, Paris.

32 (LXVIII, Nos. 3 and 5.) *Sur le traitement des osteo-arthrites tuberculeuses du genou par l'association combinée de la méthode sclérogène et des injections intra-articulaires. Villemin.
33 Failure of Attempts to Inoculate Alopecia Areata. Jacquet.—Echec de 100 tentatives d'inoculation peladique.
34 (No. 4.) *Névrites optiques périphériques: leur traitement chirurgical. E. Koenig.
35 Traitement des affections des organes respiratoires au moyen d'un appareil d'inhalation thermo-régulateur et gazéfication. Heryng.

32. Treatment of Tuberculous Knee Affections with Combined Sclerogenic and Injection Method.—Lannelongue described in 1891 his method of treating joint affections and hernias by local injection of a solution of chlorid of zinc, as was duly chronicled in THE JOURNAL at the time. He called this the "sclerogenic method," and time has confirmed his previous announcements, he says. Of late years he has been combining these injections with intra-articular injection of an oily solution of iodoform and creosote in the proportion of 10 parts iodoform, 2 parts creosote and 40 parts ether to 90 parts olive oil. The patients are cured with surprising rapidity by this combination. In case of a typical "white swelling," he first evacuates the intra-articular effusion by puncture, and then injects about 20 gm. of the iodoform solution, then applies compression and immobilization. A few days to two weeks later, the 10 per cent. zinc chlorid is injected under the periosteum, the needle inserted at various points, the aim being to inject it in the regions containing the blood vessels which supply the synovial membranes and in the fungous lesions along the ligaments. The caustic transforms the fungous tissue, causes sclerosis of the tuberculous tissue, and strangles the colonies of bacilli in a mass of fibrous tissue. It must never be injected into the synovial cavities, as this would cause a violent and useless reaction. Its purpose is to destroy the growing colonies which are always to be found in the parts closest to normal tissue, at the periphery of the spongy growth. The normal tissues which limit the morbid focus are the matrix elaborating constantly the tubercular neoplasm under the influence of the bacillus. By modifying this limiting zone the tuberculous process is walled in, while the iodoform injection kills the germs ensconced in the focus. He calls this combined method the intra-extra-articular, and urges its application in all cases of tuberculous osteo-arthritis of the knee, elbow or wrist, with or without effusion. He thinks that if the vague complaints of children were better heeded, these affections could be diagnosed much earlier, and treatment applied to still better effect in the incipient stages. The technic is described in detail as applied in 3 cases, girls between 11 and 13, with white swellings of long standing, having entailed atrophy of leg muscles. The cure was complete in 2 of the cases in five months, the patients dismissed using the knee freely. The third child is still under treatment. In Lannelongue's service at the Enfants-Malades Hospital this method is now currently applied with most gratifying results.

34. Surgical Treatment of Peripheral Optic Neuritis.—Koenig attributes peripheral optic neuritis to some preceding infection, such as la grippe, typhoid fever, gonorrhea, etc. This form is characterized by the absence of vascular stasis and brain disturbances, by the limitation of the edematous infiltration to the optic papilla and by its unilateral development. It is the result of circulatory disturbances limited to the papilla and bulbar end of the optic nerve. As it is impossible to act directly on the posterior pole of the eye, he applies treatment to the anterior pole—knowing the close relationship between the two—and treats the condition by sclerotomy. His experience has been limited but satisfactory with this procedure.

Presse Médicale, Paris.

36 (1, No. 6.) Technique de l'hystérectomie abdominale dans les suppurations annexielles. J. L. Faure.

37 Différence de potentiel. Courant électrique. M. Lermoyez.
38 *A propos de la castration ovarienne dans le cancer du sein. J. Dumont.
39 *Un nouveau procéde pour les instillations aux prostatiques. Melun.
40 (No. 7.) Les nouveaux aspects de la lutte antituberculeuse en Allemagne (in Germany). E. Fuster.
41 Une pendaison à Tunis (a hanging). C. Nicolle.
42 Le chlorure de sodium au point de vue diététique. A. Martinet.
43 (No. 8.) Coeur mobile et cardioptose. E. Barié.
44 *Sur la sérumthérapie de la peste. V. Godinho.
45 L'audition chez les enfants à l'école (in school children). Duhar.
46 *Considérations sur l'anesthésie par l'éther et par le chloroforme. A. Mayor.
47 *Les rayons Blondlot (rayons N). G. Vitoux.
48 Formes des courants électriques. M. Lermoyez.
49 Traitement d'une blessure d'une grosse artère (of wound of artery). A. Yvert.

38. **Ovarian Castration in Cancer of the Breast.**—Dumont refers to 4 cases in France in which a mammary cancer subsided after removal of the ovaries. He also cites a large number published in England in which the cancer seemed to be favorably influenced by the castration. On the other hand, no result was apparent in a still larger proportion, and none of the patients was really cured.

39. **Instillations in Case of Hypertrophied Prostate.**—Melun advises to introduce the instillator sound through the larger sound previously inserted into the bladder for lavage of the organ. The introduction is thus rendered much easier and the silver instillations are not painful, as the solution does not come in contact with the urethral sphincter, which is usually very sensitive.

44. **Serum Treatment of the Plague.**—Godinho is superintendent of the isolation hospital at Sao Paulo, Brazil, and states that the antiplague serum made by Dr. Vital Brazil and used there is proving fully as effectual as diphtheria antitoxin in diphtheria. Brazil found that mules bear inoculation with the plague germs much better than horses, and thus uses these animals. Their serum is peculiarly active, and almost invariably cured the bubonic form of the plague in an adult when administered before the third day. It frequently cured as late as after the fourth day, and occasionally after the fifth. The disease is much severer in children. The pneumonic form of the plague is too rapidly fulminating in its course for serum treatment to be effectual. It is also liable to fail in the septicemic form, which Godinho regards as a late form of the previously unrecognized disease. [The Brazilian government was petitioned by the last national medical congress to appropriate funds to defray the expenses of a trip to Europe by Dr. Vital Brazil to demonstrate his method of making serums, especially his serum against snake bites. Some of his results were given in THE JOURNAL, xli, page 504.—ED.]

46. **Ether vs. Chloroform.**—Ether kills by arresting the respiration. The heart continues to beat for a certain length of time, and artificial respiration offers a chance for resuscitation. Chloroform, on the other hand, kills by arresting the heart action. Artificial respiration and other procedures commonly employed in such cases are absolutely ineffectual. The only means of restoring the heart functions are by direct massage of the organ. The results of this massage have not been very encouraging to date, no case being known in which the patient survived more than twenty-four hours after his resuscitation.

47. **The Blondlot Rays—the N Rays.**—These new rays have been mentioned in THE JOURNAL recently, page 404. Vitoux describes them in detail, mentioning additional facts in regard to them, such as that certain substances store up these rays and emit them afterward spontaneously. Gold, silver, platinum, zinc, iron, etc., after exposure to the sunshine, to an arc lamp or a kerosene light, which all emit the N rays, absorb them and in turn emit them until the store is exhausted. Molecular compression is peculiarly favorable for the production of these rays. Iron is only a transient source for the rays, but after compression it emits them permanently. Tempered steel is thus a permanent source for the rays. They are subject to polarization, refraction and to the laws of reflection, differing thus from the *x*-rays. It has also been found that sound waves constitute a source for the N rays.

Revue de Chirurgie, Paris.

Last indexed page 493.

50 (XXIV, No. 2.) Un nouveau cas de kyste juxta-intestinal. F. Terrier and P. Lecene.
51 *Des angiomes du sein (of breast). P. Malapert and R. M. Beauchant.
52 Recherches expérimentales sur les fractures limitées du fond de la cavité cotyloide. L. Thévénot.
53 Ulcère perforé de l'estomac. Intervention. Guérison. Considérations sur le drainage dans les peritonites. P. Guibal.

51. **Angioma of Breast.**—The patient in the case reported was a girl of 12. The tumor had been noticed soon after birth, but did not commence to grow until about the sixth year. In the 13 cases on record there was no recurrence after ablation of the breast, which was done as the routine procedure whenever the angioma was not quite superficial. The sexes were about equally represented.

Semaine Médicale, Paris.

54 (XXIV, No. 5.) *La valeur diagnostique et pronostique de la fièvre dans l'appendicite. L. Cheinisse.
55 Fractures of Radius by Automobile Levers. Lucas-Championnière.—Fractures causées par la manivelle de mise en marche des moteurs d'automobiles. From society report.

54. **Fever in Appendicitis.**—Cheinisse emphasizes the facts that fever is almost an invariable accompaniment of appendicitis, but it is usually moderate and transient. The gravity of the prognosis increases with the intensity of the fever. When the temperature persists and rises after the fifth day, it denotes the formation of an abscess. The mortality in the cases he has collected averaged 11.5 per cent. in the medical cases with temperature not above 39 C., while it reached 36.3 per cent. in the cases in which there was fever above 40 C. In the surgical cases the mortality reached 35.3 and 75 per cent. The prognosis is dubious also when the pulse rate does not harmonize with the state of the temperature. Another important sign is the difference between the temperature in the axilla and in the rectum when the peritoneum is involved. In case of a suppurative appendicitis, the difference may amount to several degrees. It has been noticed also that the maximum temperature is observed between 9 and 10 p. m. in the severer cases.

Archiv f. Gynäkologie, Berlin.

Last indexed page 207.

56 (LXX, No. 3.) Zur Frage der proliferierenden, aus Luteïn-Zellen bestehenden Ovarial-Geschwülste (tumors). V. Grouzdew (Kazan).
57 Blasenmole und Eierstock, Beitrag zur Pathologie des Corpus luteum. J. Jaffé.
58 *Ueber Prolaps-Operationen und deren Dauer-Resultate. M. Jacoby (Breslau).
59 *Ueber puerperale Metro-Phlebitis. Grossmann (Dresden).
60 Artificial Premature Delivery with Contracted Pelves. C. Hahl (Helsingfors).—Klinische Studie über die künstliche Frühgeburt bei Beckenenge.
61 Zur mechanischen Erweiterung des Cervical-Canales und des Muttermundes während der Schwangerschaft und der Geburt. R. de Seigneux (Geneva). New dilator.
62 Zur Physiologie des Blutes Neonatorum in den ersten 10 Lebens-Tagen. E. Sciplades (Ofen-Pest).
63 Prolapse of Placenta Normally Located. F. Kayser.—Ueber Vorfall der Plazenta bei normalen Sitz.
64 *Zur Aetiologie, Symptomatologie und Therapie der Extrauterin-Gravidität. E. Runge.
65 Morbidity After Delivery of Macerated Fetus. C. Kothen (Giessen).—Ueber die Morbidität im Wochenbett nach Geburt von mazerierten Früchten.

58. **Remote Results After Prolapse Operations.**—Jacoby reports the late results in 202 out of 257 cases in which some operation was performed for the relief of prolapse of the uterus. The position of the organ was corrected whenever it was found in backward displacement and involved in the prolapse of the vaginal wall. A proportion of 94.5 per cent. were found permanently cured. Better results were attained with the Alexander-Adams operation than with any other method. The number of permanent cures is higher than those reported from Fehling's clinic (76.9 per cent.), Küstner's (69 per cent.), Schauta's (66.6 per cent.), Baumm's (69.3 per cent.) and Zweifel's (33.3 per cent.). Excessive prolapse after the child-bearing age and the irreducible were treated by total extirpation. Prolapse of the posterior vaginal wall on ground of old laceration of perineum was treated by Asch's method of perineal plastics, which is described in detail. Plastic conservative operations were preferred whenever possible, and each case was treated according to individual conditions without routine rules.

59. **Puerperal Metrophlebitis.**—During the last four years 105 women were treated at the Friedrichstädter Hospital for puerperal sepsis with death in 54 cases. All but 3 of the latter came to postmortem, and in 14 cases pure thrombophlebitis was found, in 24 pure lymphangitis and in 13 a combination of both. In all the cases of thrombophlebitis, with one exception, besides the hypogastric and uterine veins, still other veins were involved in the process, including the cava in 3 instances. There was only a single case, therefore, in which Trendelenburg's proposed extraperitoneal ligature and resection of the thrombosed vein could have been applied. This one patient was in too debilitated condition for any intervention to be attempted. The pure thrombophlebitis ran a more chronic course, lasting several weeks or months, while in 16 of the 24 cases of pure lymphangitis the patient succumbed in a few days. In the 13 of the associated form death occurred rapidly in 7 and not until after several weeks in 4. In 14 of the 51 fatal cases the birth had been spontaneous; in 9 there had been spontaneous abortion, in 8 forceps delivery and in 11 operative intervention during or after an abortion. In 9 cases the particulars could not be learned.

64. **Symptomatology, Etc., of Extrauterine Pregnancy.**—This article is based on study of 233 cases observed at the Berlin Charité. In the 73 cases of abortion 36 recovered after operation and 36 under expectant treatment. One patient succumbed, notwithstanding the operative intervention. In the 47 cases of tubal rupture 5 recovered without an operation, and 11 deaths occurred among the 42 operated on. Runge concludes that hematocele, which was noted in 108 of the cases, had better be treated conservatively whenever possible. He ascribes the etiology to pathologic childbed or chronic gonorrhea.

Archiv f. klinische Chirurgie, Berlin.

Last indexed page 685.

66 (LXXII, No. 2.) *Local Anesthesia in Extraction of Teeth. A. Läwen (Leipsic).—Die örtliche Anasthesie bei Zahnextraktion, mit bes. Berücksichtigung der Kokain-Adrenalingemische.

67 *Operations in Nasopharynx. E. Payr (Graz).—Ueber neuren Methoden zur operativen Behandlung der Geschwülste des Nasorachenraumes, mit bes. Berücksichtigung der Kocher'schen Resektion beider Oberkiefer.

68 Position of Esophagus in Spinal Curvature. W. Jawin (Moscow).—Die Lage der Speiseröhre bei verschiedenen Verkrümmungen der Wirbelsäule.

69 Zur Agglutination der Staphylokokken. Klopstock and Bockenheimer (Berlin).

70. Ueber eine Prothese für einen Teil des Oesophagus nach partieller Exstirpation des Larynx und Pharynx-Resektion. P. Freund (Breslau).

71 *Die äussere cervikale Oesophagotomie zur Extraktion von Fremdkörpern im Oesophagus (foreign bodies). Balacescu and Kohn (Bukharest).

72 Transposition of Intestine. W. Prutz and A. Ellinger.—Ueber die Folgen der Darmgegenschaltung. Beitrag zur Frage der sogen. Antiperistaltik.

66. **Anesthesia for Extracting Teeth.**—Läwen gives the history of anesthesia for this purpose, and recommends injection of a combination of cocain and adrenalin as far superior to all other methods. He mixes three drops of 1 per 1,000 adrenalin to each c.c. of a 1 per cent. solution of cocain. One or 2 c.c. of the mixture are sufficient. The anesthesia thus obtained is much more durable than by other methods, while the intense anemia of the parts favors the intervention, and reduces the toxicity of the cocain. Even in cases of caries and alveolar periostitis, the anesthesia is nearly always perfect, but it is liable to be occasionally imperfect in case of pulpitis.

67. **Operations on Tumors in Nasopharynx.**—Payr has been much pleased with the ample access afforded by the Kocher technic of resecting both jaws. The disfigurement and functional disturbances caused by the intervention are trivial, while its advantages are obvious. He places the patient on a steep incline with the head raised, but hanging over the edge of the table. This avoids much passive hyperemia, and enables preliminary tracheotomy and ligature of the carotids to be dispensed with. He employs this position likewise for other operations on the upper air passages. He mentions that it is wise to determine the vascularity of polyps in the nasopharynx before operating on them. This can easily be done by examining them after the head has been hanging down.

71. **Foreign Bodies in Esophagus.**—The statistics presented include a case personally observed and 325 collected from the literature, in which the foreign body was removed by external cervical esophagotomy. The mortality was 21.1 per cent. of the total number, but only 12.6 per cent. of the 55 cases during the last three years. The details of each case are briefly summarized. The most dangerous foreign bodies are stones, bones, false teeth and coins. Pins caused two deaths in the 13 cases in which the operation was performed on this account; coins five deaths in 45 cases, nearly all children, and false teeth, twenty-four deaths in 111 cases. The fatal termination was usually due to lesions from the long sojourn of the foreign body in the esophagus.

Archiv f. Verdauungskrankheiten (Boas'), Berlin.

Last indexed page 619.

73 (IX, No. 5.) *Utilization of Nutrient Enemata. Bial (Mering's clinic, Halle).—Ausnützung von Pepton- und Pepton-Alkohol-Klysmen.

74 *Bemerkungen über Gastralgie, Magen-Kolik und Kolik im Allgemeinen. Meltzer (New York).

75 Dilatation of Esophagus Without Stenosis of Cardia. Kelling. Ueber Erweiterung der Speiseröhre ohne Stenose der Kardia.

76 *Enteralgie und Kolik. Ueber Mesogastralgie, zur Klarstellung des Begriffes Enteralgie. Buch (Helsingfors).

77 Zur Methodik des Albumosen-Nachweises. O. Freund.

73. **Utilization of Nutrient Enemata.**—Bial has tested various nutrient enemata on his own person, and found that the absorption of peptone enemata reached 50.5 per cent., and of the peptone-alcohol, 60 per cent. The formula found most effective at the clinic is 25 gm. each of pept. sicc.; sacch. lact., and absolute alcohol, with ten drops of tinct. op. simpl., and water to 250 gm. Three such enemata are given during the day.

74. **Study of Colic.**—Meltzer accepts the law that normal peristalsis consists in the contraction of the canal above and relaxation below the point of irritation. When to the contraction above is superadded a contraction below, the result is colic, as the content pressed down from above is arrested by the contracture below. He explains gastralgia by a modification of this law, regarding the contrary innervation as possibly a factor in the pathology of the crises of tabes.

76. **Enteralgia and Colic.**—Buch ascribes the pain in certain cases of gastralgia and enteralgia to the plexuses of the sympathetic, behind the organs which are apparently the seat of the colic. Pressure on these plexuses in these cases will elicit pain similar to the preceding colics. He suggests the term mesogastralgia for the pains in the lower lumbar sympathetic system, including the aortic and upper hypogastric plexuses, and epigastralgia for those in the upper lumbar sympathetic. He recognizes three varieties of mesogastralgia. In the first there is an almost constant sensation of discomfort in the mesogastrium, and the lumbar sympathetic is in a condition of irritation which entails mesogastralgic attacks on slight provocation. In the second variety, the periods of excessive irritability of the lumbar sympathetic alternate with others of normal conditions, the intervals ranging from a few days to weeks. He thinks this group includes von Leyden's "periodical vomiting" and the gastric crisis of tabes. The third variety is marked by a sudden violent attack occurring in the midst of health and gradually subsiding, but leaving for some time an echo of the previous disturbances. All three varieties have in common a constant overexcitability of the lumbar sympathetic, due to a great number of possible causes. He thinks that this neuralgia of the mesogastric lumbar sympathetic system is a very frequent affection, far more frequent than true bowel colic.

Berliner klinische Wochenschrift.

78 (XLI, No. 5.) *Ueber cytodiagnostische Untersuchung des Liquor cerebrospinalis. E. Meyer (Kiel).

79 *Perityphlitis, Peritonitis, Meteorismus. A. Oppenheim (Berlin).

80 *Lactagog. T. Zlocisti (Berlin).—Die Steigerung der Secretion bei stillenden Müttern.

81 *Cancer of the Choroid. J. Hirschberg (Berlin).—Zur Prognose der bösartigen Aderhautgeschwülste. (Commenced in No. 4.)

82 (No. 6.) *Zur medicamentösen Behandlung von Neuralgien und Myalgien. E. Meyer.

83 Recurrent Paralysis from Mitral Stenosis. A. Alexander.—Fall von Recurrenslähmung bei Mitralstenose.

84 Fall von Bronchiectasie bei einem Patienten mit Situs inversus viscerum. A. K. Siewert.

78. **Cytodiagnosis.**—Meyer found pronounced lymphocytosis in 14 out of 15 cases of paralysis or tabes, and in 4 of other organic neurologic affections. In 17 others belonging to the group of so-called functional disorders, there was no lymphocytosis. His experience, therefore, indicates that lymphocytosis has considerable diagnostic significance for the differentiation of organic affections with chronic irritation of the meninges. Paralysis is sometimes years in developing, so that positive findings may not be confirmed by the clinic for months or years afterward.

79. **Appendicitis and Meteorism.**—Oppenheim regards the absence of dullness over the liver as a pathognomonic sign, to a certain extent, of local peritonitis originating in the appendix. He does not ascribe much diagnostic importance to the subjective symptom of pain.

80. **To Promote Lactation.**—Zlocisti argues that the infant after birth is as much dependent on the maternal organism for nutrition as during its fetal existence. It needs the milk as it needed the placental circulation before. He has applied to women the experience of stock raisers in regard to the value of cotton seed as a milk-producing substance for milch cows. The pulverized cotton seeds were given to nursing women when the milk seemed to be diminishing in quantity or quality, and the way the infants thrived on the milk produced in abundance afterward testified to the lactagogue efficacy of the "lactagol," as the powder is called. He urges the collection of statistics, showing the proportion of bottle-fed infants who have tuberculosis or cancer later, suggesting that the lack of breast nursing may prepare the soil for these diseases.

81. **Prognosis of Malignant Tumors in the Choroid.**—Hirschberg has had occasion to observe and operate on 68 cases of sarcoma of the choroid region. The tumor was located in the iris in 2; in the choroid in 63, and in the ciliary body in 3. Death occurred from metastasis in 16 certainly, and in 1 probably, the interval after removal of the primary tumor being less than one year in 7; less than two years in 6; four years in 1; more than seven years in 1, and more than nine years in 1. He describes the latter case in particular. A melanotic sarcoma was treated by enucleation of the eye in the early stage, while vision was still 1/12 and the visual field still ½ of normal. The operation relieved the patient of pain and discomfort, but she succumbed to a metastasis, which developed rapidly in the liver, after an interval of nine years of health. His results confirm the benefits of prompt intervention, and the probabilities of complete cure if four years elapse without recurrence. Only 3 out of his 68 patients died from this cause after this interval had passed.

82. **Medicinal Treatment of Neuralgia and Myalgia.**—Meyer reports experiences which confirm the efficacy of the antipyretics for the relief of neuralgia and myalgia. He prefers hydrochinon for the purpose, a dihydroxyl-benzol midway between resorcin and brenzcatechuin. Its effect corroborates the close connection between the chemical composition and the pharmacologic action of this class of drugs.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed XLI, page 1567.

85 (LXX, Nos. 5-6.) *Experimental Research on Peritoneal Transudation. Schrader.—Exp. Beiträge zur Kenntnis des Transudationsvorgänge am Bauchfell, sowie zur Kenntnis einiger klinisch wichtiger Eigenschaften des Glycerinum officinale.

86 *Successful Experimental Transplantation of Suprarenal Tissue. Schmieden (Bonn).—Erfolgreiche exp. Verlagerung von Nebennierengewebe, ein Beitrag zur Lehre von den Strumæ suprarenales aberratæ.

87 *Operative Treatment of Peritoneal Tuberculosis. Thoenes (Göttingen).—Zur Frage der op. Behandlung der Bauchfelltuberkulose und deren Dauerresultate, nebst 3 Fällen von Tuberculosis herniæ.

88 *Zur Prognose der Radikal-Operation der Hernien. Pott.

89 Primäre akute Typhlitis (stercoralis). Sick (Kiel).

90 Zur Differential-Diagnose und Aetiologie inkarzerierter Hernien. Ibid.

91 (LXXI, Nos. 1-2.) *Ueber intraperitoneale Digital-Compression von Becken-Blut-Gefässen. Madelung.

92 *Ueber Ligatur und Compression der Arteria iliaca communis. K. Dreist.

93 Experimente und Studien zur Hirn-Druck-Frage (compression of the brain). W. Leonhardt (Strasburg). Experimental research on pigeons and rabbits.

94 *Ueber den Hallux valgus. W. Röpke (Jena).

95 *Ueber das Aneurysma der Arteria hepatica. Grunert (Magdeburg).

96 *Die Behandlung der Hypospadie nach der Beck'schen Methode. A. Martina (Graz).

85. **Transudation from the Peritoneum.**—Concentrated solutions of grape sugar and table salt injected into the peritoneum induced constantly a copious transudation of a serous fluid. This also occurred with glycerin, the amount of transudation proportional to the amount of glycerin. More than 10 c.c. always proved fatal, the animal exhibiting tonic clonic spasms with transudation up to 8 per cent. of its weight.

86. **Experimental Transplantation of Suprarenal Tissue.**—The experiments were successful in 25 out of 40 attempts, undertaken during 27 operations. Schmieden reviews the literature on the subject of transplantations in general.

87. **Operative Treatment of Tuberculosis of Peritoneum.**—Thoenes' experience includes 45 cases. The results compel him to advocate operative treatment for all cases of peritoneal tuberculosis which show no signs of improvement after several weeks of internal treatment. If there is high fever, the laparotomy is frequently able to arrest the disease process or at least to relieve the patient. After removal of the primary focus the affection frequently entirely retrogresses. The prognosis of operative intervention is more favorable for the cases with than for those without effusion. Tough adhesions must not be disturbed on account of the danger of fecal fistula. General sepsis is an absolute contraindication to operation. Fifteen were completely cured out of 25 patients under observation for more than two years since the laparotomy. Ten have died.

88. **Prognosis of Herniotomies.**—Pott urges the establishment of statistics including in the deaths imputable to the operation all those that would not have occurred if the operation had not been performed. He also rejects all cases in which less than two years have elapsed since the intervention. He states that 212 deaths have occurred in a total of 23,519 radical operations, a mortality of .9 per cent. In 139 in which the cause of death is known, it was traceable to septic processes in 43, and to lung complications in 42. The remote results show a proportion of 82 per cent. cured of the inguinal hernias; 70.5 per cent. of the femoral hernias and 55 per cent. for the abdominal.

91. **Intraperitoneal Compression of Iliac Artery.**—Madelung describes the manner of digital compression of the iliac artery by an assistant which enabled him to ligate this and the epigastric artery after a stab wound. He found afterward that McBurney had preceded him in this suggestion, but with a slightly different technic. Madelung's assistant introduced his hand inside the abdominal cavity, and used the four fingers to compress the main trunk of the pelvic artery and vein against the bone (linea arcuata interna). Gauze was packed around the hand to close the cavity.

92. **Ligature and Compression of Iliac Artery.**—Dreist states that before the era of antisepsis there were 59 cases on record in which the common iliac artery was ligated, with 46 deaths. Since then there are 18 on record with 10 deaths. In 5 cases of temporary ligature, 5 of digital and 15 of instrumental compression, all the patients recovered without mishap except the occurrence of a slight, transient gangrene in one instance. He advocates intraperitoneal digital compression as the safest procedure. Permanent ligature was followed by fatal gangrene in 6 out of the 7 cases of gangrene reported from the preantiseptic era, and even since then there have been 6 cases of gangrene with 2 deaths.

94. **Hallux Valgus.**—Twenty-three patients were treated by the Reverdin method of incision and chiseling away of the projecting bones. All were relieved of their disturbances and good functional results were attained.

95. **Aneurism of Hepatic Artery.**—Grunert describes one case and reviews 34 he has found in the literature.

96. **Beck's Method of Treating Hypospadia.**—Martina reports fine results in 4 cases treated by this method.

Wiener klinische Wochenschrift, Vienna.

Last indexed page 688.

97 (XVII, No. 2.) *Preventive Antitoxin Treatment. K. A. Zuppinger.—Wert der Schutzimpfung gegen Diphtheritis.
98 *Der Fett-Konsum in den Tropen. Beitrag zur Physiologie der Wärme. O. Effertz (Miahuatlan, Oaxaca, Mexico).
99 Die Ambozeptor-Theorie und der Kälte-Versuch von Ehrlich und Morgenroth. M. Gruber.
100 *Roentgen-Diagnostik der Nebenhöhlen. Weil. From society report.
101 (No. 3.) Ueber eine Thrombose der Vena cava inferior bei Schwerer Chlorose mit Heilung, und über den Blutbefund bei Chlorose. M. Weinberger.
102 Analogies Between Colloid Silicic Acid and Immune Bodies. K. Landsteiner and N. Jagic.—Analogien der Wirkungen kolloidaler Kieselsäure mit den Reaktionen der Immunkörper und verwandter Stoffe. See editorial, p. 656.
103 *Ueber akute Skolikoiditis und Perityphlitis im Kindesalter. F. Spieler. (Commenced in No. 1.)
104 Traumatisches Aneurysma der Arteria poplitea infolge einer Exostose des Femur. M. v. Statzer.

97. **Preventive Serum Treatment Against Diphtheria.**—Zuppinger reviews the experiences that have been published in various countries, and appends his own. Out of 1,000 children exposed to diphtheria and treated by preventive injections of antitoxin, only 18 developed the disease later. Of this number 11 had evidently already contracted the disease, as the symptoms developed almost at once. There were thus only 7 cases in which the preventive injections failed to protect, and some of these had extenuating circumstances.

98. **Consumption of Fat in the Tropics.**—Effertz resides in southern Mexico, in one of the hottest regions on the globe. He was amazed to find that the natives craved as much, if not more, fat in their food than the Eskimo, and theorizes to explain this fact. The excessive perspiration cools off the lightly clad body to such an extent that the subjective sensation of chilliness surpasses that of the Eskimo in his furs. The body, therefore, craves fats to replace the calories thus lost. He remarks that many interesting facts are yet to be learned in the tropics—not in the towns, but in the country where observers are rare.

100. **Roentgen Diagnosis of Conditions in the Sinuses.**—Weil thinks that injection of some fluid which casts a shadow with the Roentgen rays might be utilized as a means to explore the frontal, maxillary and other sinuses. An emulsion of bismuth and lead sulphate seems to be the best adapted for the purpose, the subject reclining when the injection is to be made in the frontal sinus.

103. **Acute Appendicitis in Children.**—This extensive article is based on the experiences in A. Fraenkel's surgical service and Weichselbaum's Institute of Pathologic Anatomy. A number of cases are described in detail and illustrated. In one case a bent pin was found in the appendix, in another an oxyuris, in another the appendix was twice twisted on its axis, with several perforations. He calls the affection scoleocoiditis, from the Greek term scoleos, worm, and proclaims that it occurs even more frequently in children than in adults. The severe, "diffuse" forms predominate. Among the factors inducing this form are extreme virulence of the infectious germs, fecal concretions—foreign bodies and parasites are very rare in the etiology—abnormal shape, size and position of the appendix and disturbances in its circulation from torsion. The resistance of the childish organism to the severe, diffuse, even septic peritonitis resulting from appendicitis, is most surprising. Nothing but extreme leucopenia justifies an absolutely bad prognosis. In children, even more than in adults, the principle of immediate operation so soon as the clinical diagnosis is established, should prevail. He adds a long list of the literature discussing the subject of appendicitis in children.

Siglo Medico, Madrid.

Last indexed page 624.

105 (Nos. 2562-66.) Organizacion medica de los dispensarios y diagnostico precoz de la tuberculosis pulmonar. D. F. Campa.
106 Amputation of Cervix Cause of Dystocia. S. Recasens.—La amputacion del cuello del utero como causa del distocia.
107 (No. 2567.) Puericultura y Talasoterapie. M. de T. Latour. (Concluded.)
108 (No. 2568.) *Algunas consideraciones practicas sobre la cirrosis hipertrofica biliar. A. Perujo.
109 Annual Report of Chief of Sanitary Service. A. Pulido. **(Continued.)**
110 (No. 2569.) *Beneficios de la antipirina en los paises calidos (value in hot countries). D. B. G. Alvarez.
111 (No. 2570.) La importancia de la higiene de la boca (of mouth). E. Ramon.
112 (No. 2571.) Higiene profilactica del nino respecto de la herencia (prophylaxis in heredity). D. B. G. Alvarez.
113 (No. 2573.) Escala hidrologica. D. B. Quesada.
114 (No. 2575.) Indicaciones nuevas acerca del empleo de la adrenalina. F. Suarez de Mendoza.
115 *Tratamiento de la ulcera serpiginosa de la cornea por el suero antipneumococico. P. Alvarado.
116 (No. 2576.) Metrorragias por retroversion. D. P. Lizcano.
117 Report of International Medical Congress, Madrid, April 23, 1903. (Continued.)
118 (No. 2577.) Structure of Optic Thalamus. Ramon y Cajal. Abstract.
119 La actividad medica espanola del presente. E. Sanchez y Rubio.
120 (No. 2578.) Tratamiento de la rabia por el metodo de Hogyes. F. Murillo.
121 Neurastenia y pseudofobias de origen intranasal. C. Compaired.
122 Mecanismo de la accion hipnotica. D. V. Peset y Cervera.
123 (No. 2580.) Paralelismo dinamico entre los aparatos circulatorio y nervioso y sus relaciones con los fenomenos electricos. D. R. Merino y Sanchez.
124 (No. 2581.) Fecundidad despues del legrado (conception after curetting). P. Lizcano y Gonzalez.
125 (No. 2582.) Tratamiento de las afecciones de las vias lagrimales. B. Castresana. (Commenced in No. 2577.)

108. **Hypertrophic Cirrhosis of the Liver.**—Perujo emphasizes that when the liver is enlarged and intense icterus persists, the organ is affected with hypertrophic cirrhosis in the majority of cases. It is impossible in some cases to differentiate it from the liver enlarged by an accumulation of bile, but the persistence of the icterus speaks against the latter. Edema, no matter how slight and transient, is the fundamental diagnostic sign of the former, and accentuates the gravity of the prognosis. Treatment should aim to keep the emunctories open and counteract the intoxication. Sodium salicylate or benzoate are useful, but quinin is useless, and even directly injurious in case of hypertrophic cirrhosis of the liver. Quinin is usually given to such patients, but it should be discontinued if prompt benefit is not apparent, and if there are no signs of severe malarial intoxication. The fever in hypertrophic cirrhosis is septic and biliary—very rarely malarial, in Spain at least, and to waste time with quinin, overlooking the actual condition and its indications, is harmful.

110. **Value of Antipyrin in Hot Countries.**—Alvarez ascribes the effects of extreme heat or insolation to a vasomotor paresis. This entails congestion in the various viscera and toxemia, with symptoms ranging from headache, vertigo, vomiting and hemorrhage to syncope, delirium, asphyxia and death. Treatment should aim to increase the blood pressure, to reduce putrefaction in the intestines and promote elimination of the toxins. All these conditions are realized, he thinks, by antipyrin. It has a pronounced vasoconstricting action, and is a tonic for the vasomotor and nervous system in general. Its antiseptic action is also established, and hence it responds to the second indication above. It also restores the eliminating functions to normal by its influence on the nervous apparatus. He regards it as a harmless remedy, citing numerous authorities to show that even 20 gm. have no injurious effect beyond inducing deep sleep. The only by-effects ever noted from it were vomiting, sweats and urticaria when unusually large doses had been taken. He suggests that it might prove useful likewise in filariasis and bilharzia affections.

115. **Antipneumococcus Serum Treatment of Corneal Ulcers.**—Römer's experimental research on the etiology of serpiginous ulcers of the cornea establishing their pneumococcus origin, inspired Alvarado to treat rebellious ulcers of this kind with antipneumococcus serum. He describes 4 thus treated, all rapidly healing under the injections. He found that .5 to 2 gm. of the serum could be injected under the conjunctiva without causing much disturbance, either local or general, the only reaction being an occasional exacerbation of the periorbital pains. The symptoms of the ulcer retrogress in a few hours, and hypopion and parenchymatous infiltration are also favorably influenced. The injections may be repeated several times if necessary.

Nordisches medicinisches Archiv, Stockholm.

Last indexed page 690.

126 (XXXVI, Int. Med. No. 3.) Functional Kidney Tests. K. Hanssen and N. B. Gröndahl (Bergen.)—Zur Bestimmung der Funktionsfähigkeit der Nieren.

127 Masked Intermittent Fever in Children. J. Cronquist (Malmö).—Zur Kenntnis vom Wechselfieber und bes. dessen larvierten Formen bei Kindern. (Concluded.)
128 Ueber Streptokolyse. E. Levin (Stockholm).
129 (Surgery, No. 1.) *Various Methods of End-to-End Suture of Severed Vessels. W. Reinsholm.—Die verschiedenen Methoden für cirkuläre Vereinigung abgeschnittener grosserer Arterien- und Venenstämme. (Concluded.)
130 *Die Aetiologie und Pathogenese der chronischen Nieren-Tuberkulose (of kidney). P. N. Hansen. (Concluded.)
131 (No. 2.) Abdominale Aktinomykose in Form eines cirkumskripten, beweglichen Tumors. J. Borelius (Lund). Three cases. Tumors movable.
132 *Zur Pathologie und Theraple der Gallensteinkrankheit (cholelithiasis). G. W. Törnqvist. (Commenced in No. 1.)
133 Six Cesarean Sections. E. Essen-Möller.—Sechs Kaiserschnitte, nebst Bermerkungen über die Stellung der Säng er'schen Operation zu der Porro'schen.
134 (No. 3.) Hydrocele funiculi bilocularis extra- et intra-abdominalis. C. Wettergren.
135 *Zur Lehre von den Sarkomen des Uterus. P. N. Hansen.
136 *Nerven-Sutur und Nerven-Regeneration. P. B. Henriksen (Christiania).

129. **Circular Union of Severed Blood Vessels.**—Reinsholm's memoir is based on extensive experimental research, supplemented by work on the cadaver, in which he tested the various methods of end-to-end union that have been proposed. The work won for him the gold medal of the Copenhagen University in 1902. He describes a personal method which he thinks combines all the advantages of the Murphy and other technics, with none of their disadvantages. The carotid, for instance, was resected between clamps, in a ram. A 0 catgut with two straight needles was passed through the proximal stump close to the edge, after the outer coat of the artery had been pushed back. The needles were then introduced into the lumen of the distal stump and brought out through the wall at symmetrical points about 1 cm. from the edge. In this way a U stitch was made, parallel with the longitudinal axis of the vessel. The two stumps were then approximated, and the central stump invaginated in the peripheral by traction on the thread, the lumen of the peripheral stump stretched with two fixation forceps at the time. When the invagination was complete, it was fastened with three catgut stitches. The first invaginating thread was cut off where it emerged on one side, the rest being pulled out by the other end. Ninety-one days later the artery was found practically normal, fluids passing without difficulty and the outer shape of the artery unaltered. By this technic only one invaginating thread is used, and it is removed later. By pushing back the outer coat of the proximal stump, it becomes so much smaller that it readily slips inside the distal stump. The intima of the outer tube is injured as little as possible, and there is no folding or twisting of the inner tube, which is fastened only by the supporting sutures outside. The latter include the pushed-back "cuff" of the adventitia with some of the surrounding tissue, are very strong and firm, and only very few are required. They tampon against hemorrhage and support the cicatrix. Broad surfaces are approximated and held in contact by the blood circulating within. No foreign body is left inside the vessel, and the lumen is reduced only by the thickness of the invaginated walls. The double wall at this point of union insures solidity. The only objection to the method is that if the inner tube contracts, a dead space will be left between the two, with the edge not covered with endothelium, thus offering a chance for thrombosis. When the above technic was closely followed, nothing of the kind was observed in any of his experiments on horses, goats or rams.

130. **Chronic Tuberculosis of the Kidneys.**—Hansen's work is concluded from the preceding volume. He found evidences of chronic tuberculosis in 205 out of 547 cases of tuberculosis of one or more of the urogenital organs. The urinary organs were alone affected in 42, the genital alone in 74, and both in 89. He believes that chronic tuberculosis of the kidneys is equally frequent in both sexes and at all ages after 20. It is secondary and of hematogenic origin, when there are tuberculous lesions elsewhere, the localization in the kidney being favored by any pre-existing affection, such as retention, trauma or calculi. In isolated tuberculosis of the urinary organs it commences in the kidney. In the combined urogenital form in male subjects, the kidney is likewise the primary source of the affection. It spreads thence to the genitalia, the bacilli finding their way from the posterior urethra into the prostate. The afferent urinary passages are infected by the bacilli swept down in the urine, but no instance was encountered in which ulcerations extended continuously over a long expanse.

132. **Cholelithiasis.**—Tornqvist reviews the history, bacteriology, pathologic anatomy, etc., of gallstone affections, with special reference to the experience at Lund. He does not regard the prospects of internal medication as very promising, and warns against postponing surgical intervention until the common bile duct becomes involved. He regards cystectomy as a valuable means at our command to prevent cancer of the gall bladder later. His experience demonstrates the value of microscopic examination of the mucus adhering to the wall of the gall bladder. It often swarms with bacteria. They were found regularly in all but 2 out of 34 cases subjected to bacteriologic examination during an operation. The various particulars of his cases are tabulated, including 10 treated by cholecystectomy, 5 by choledochotomy and 25 by cholecystostomy. All recovered but one in the latter group. In 3 an operation was contraindicated, and Naunyn's internal treatment was instituted. One patient evacuated a number of very large stones and succumbed to diffuse peritonitis. The others passed a single or several large stones, and all symptoms vanished. His experience corroborates the frequency of malignant degeneration as a sequel to gallstone affections, and he regards this as a reason for preferring cholecystectomy wherever possible. He thinks that a gall bladder once the scene of a gallstone storm is not likely to regain its normal structure or functions.

135. **Uterine Sarcomata.**—In Hansen's 2 cases the growth probably originated in the interstitial connective tissue, becoming embedded later in the muscular tissue. The number of such primary parietal sarcomata is comparatively limited. There is no reason to regard them as less malignant than carcinomata. His patients were both 39, and the affection proved fatal in two years with numerous metastases. A large cystic fibromyoma and a smaller one accompanied the sarcoma in one case. The large fibromyoma was removed before the sarcoma was discovered, and for a few months all the symptoms subsided.

136. **Suture and Regeneration of Nerves.**—Henriksen describes a dozen cases of injury and suture of peripheral nerves and considerable experimental work in the same line. He finds that regeneration of a severed nerve commences at once and accompanies the degeneration. In a week new, long fibers can be discovered, which gradually develop into nerve fibers capable of functioning. There is no reason, therefore, why a certain amount of sensory conductibility may not be present during the entire regenerating process. The experiments on animals showed that a severed nerve rapidly healed, irrespective of whether it was sutured or not. When a severed nerve has healed without suture, there is more liable to be disturbance in the function where there has been infection of the wound and consequent formation of dense cicatricial tissue. It is also liable to occur in case of an injury in which the stumps of the nerve have been displaced, as from a fracture. Tests of the sensory functioning afford a means of determining the proper moment for surgical intervention. It should not be postponed longer than a month at latest, as cicatricial changes in the nerves and tissues interfere with the operation and its results. The new nerve fibers grow during the first weeks with the greatest energy, and if they bridge the gap successfully, there will soon be an improvement in the sensory sphere. If this improvement does not follow or is only slight and incomplete, this is an indication that an operation will be required, as nature is unable to conquer the conditions unaided. The development of the sensory function is, hence, of the utmost importance for diagnosis and prognosis. In operating, all cicatricial tissue must be removed, and the tips of the stumps freed from connective-tissue growth. The article is concluded.